Williams Gateway Corridor Definition Study

final

report

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final report

Williams Gateway Corridor Definition Study

prepared by

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date

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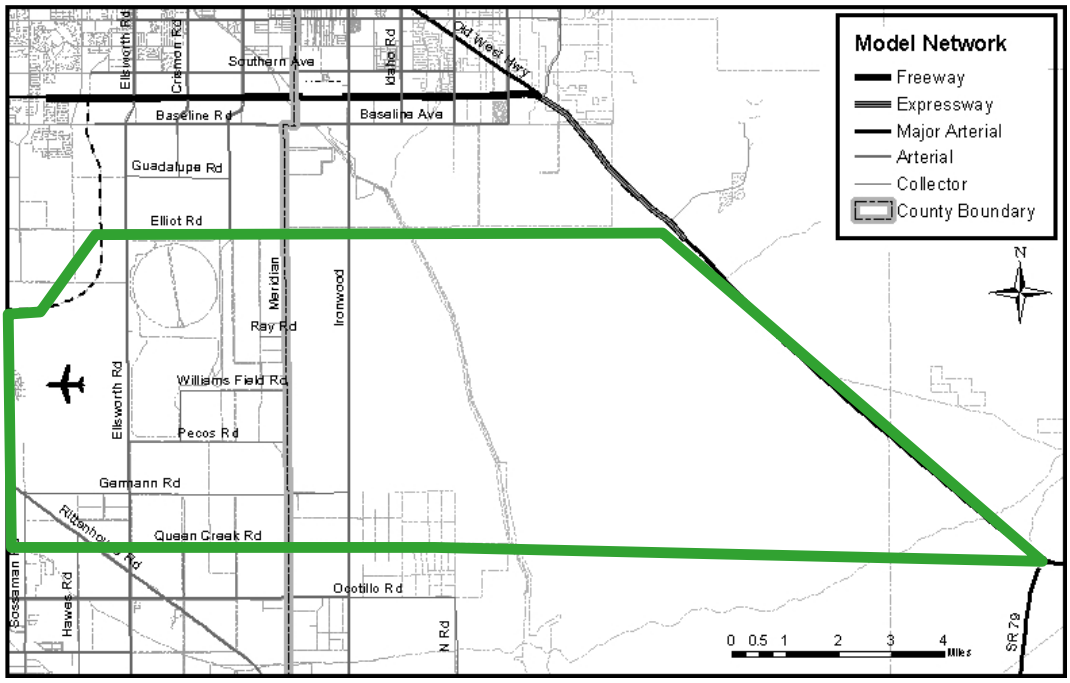
Executive Summary

The Williams Gateway Corridor Definition Study is one of three studies conducted by the Arizona Department of Transportation (ADOT) to address the need for and feasibility of new transportation facilities in southeastern Maricopa County and northern Pinal County. The Williams Gateway study focused on the need for and feasibility of a potential corridor connecting Loop 202 (Santan Freeway) in Maricopa County to U.S. 60 in Pinal County. Figure ES.1 presents the study area for the Williams Gateway study.

Figure ES.1 Williams Gateway Study Area



The two studies conducted simultaneously with the Williams Gateway study were the U.S. 60 Corridor Definition Study and the Pinal County Corridors Definition Study. The studies were coordinated closely and a common set of recommendations were developed for all three studies.

The Williams Gateway study was conducted as a joint effort between ADOT, the consultant team, and the public. The study included four basic components:

1. An identification of existing and future conditions in the study area;
2. An analysis of the need for new corridors;
3. A determination of the feasibility to construct new corridors; and

4. Several rounds of public involvement designed to ensure maximum participation from the public and stakeholders.

Existing and Future Conditions

The existing and future conditions analysis began with a review of existing studies conducted in the area. The Southeast Maricopa/Northern Pinal County Transportation Study (SEMNPTS) provided the impetus for the three corridor definition studies. A joint effort between the Maricopa Association of Governments (MAG), the Central Arizona Association of Governments (CAAG), and ADOT, this study identified potential new facilities in the study area. Numerous other studies were reviewed as well, including local and county transportation and general plans, regional plans, socioeconomic studies, and specific corridor studies.

The study considered land use, socioeconomic (population and employment), and transportation issues as part of the existing and future conditions analysis. This stage of the process provided the foundation on which the remainder of the study was built. Socioeconomic estimates and projections were used to develop a travel demand model – the Pinal Corridor Planning Model – that was used to estimate expected travel volumes on the existing transportation system and the proposed corridors.

Land use in the Williams Gateway study area consists primarily of residential development in the Cities of Apache Junction, Mesa, and Queen Creek; and of a wide swath of undeveloped State Trust Lands east of the Maricopa/Pinal County border and south of Apache Junction. In addition, the Williams Gateway airport and the General Motors (GM) Proving Ground provide an area for major potential economic development.

Developing population forecasts for the study area presented challenges due to the current rapid rate of growth. The corridor definition studies forecast over 1 million people in Pinal County by 2030. Figure ES.2 presents expected future population density in 2030 for the Williams Gateway study area. Ongoing studies by the Morrison Institute, the Arizona State Lands Department (ASLD), and others have widely varying estimates of future population. For the portion of the study area that is state lands, future projections at build out range from 350,000 to 900,000.

Population projections were used in a travel demand model to estimate future traffic volumes on freeways and local roads. These estimates were evaluated using a level of service (LOS) concept. The LOS captures how much of the roadway capacity is taken up by vehicles. Roadways, where up to 80 percent of the capacity are in use, are considered below capacity. Up to 100 percent are considered nearing capacity, and above 100 percent are considered over capacity. When traffic volumes exceed 100 percent of roadway capacity, significant slowing and gridlock are expected. Figure ES.3 presents the expected future LOS

for the base future condition (i.e., only including new roadways that are already existing or funded for construction in the future).

Figure ES.2 Population Density, 2030

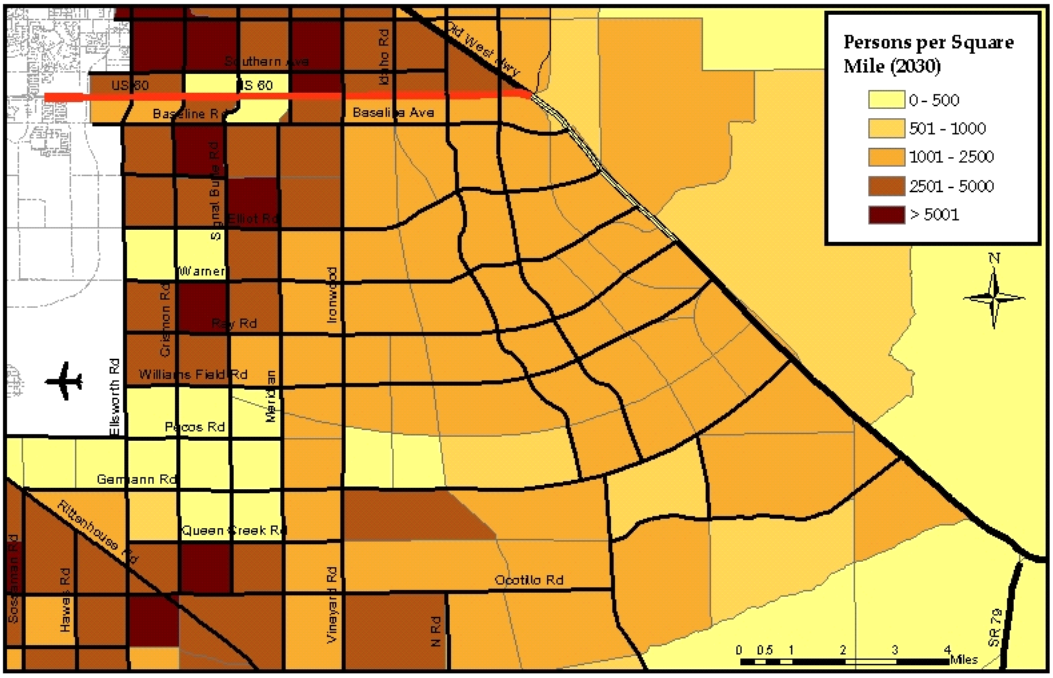
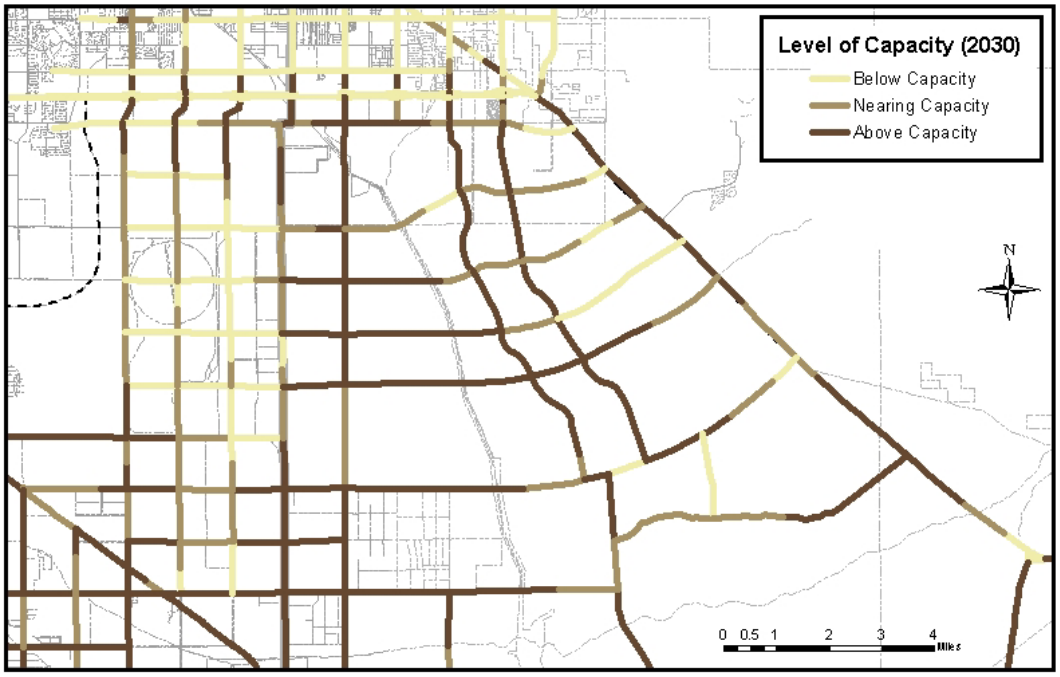


Figure ES.3 Level of Service, 2030



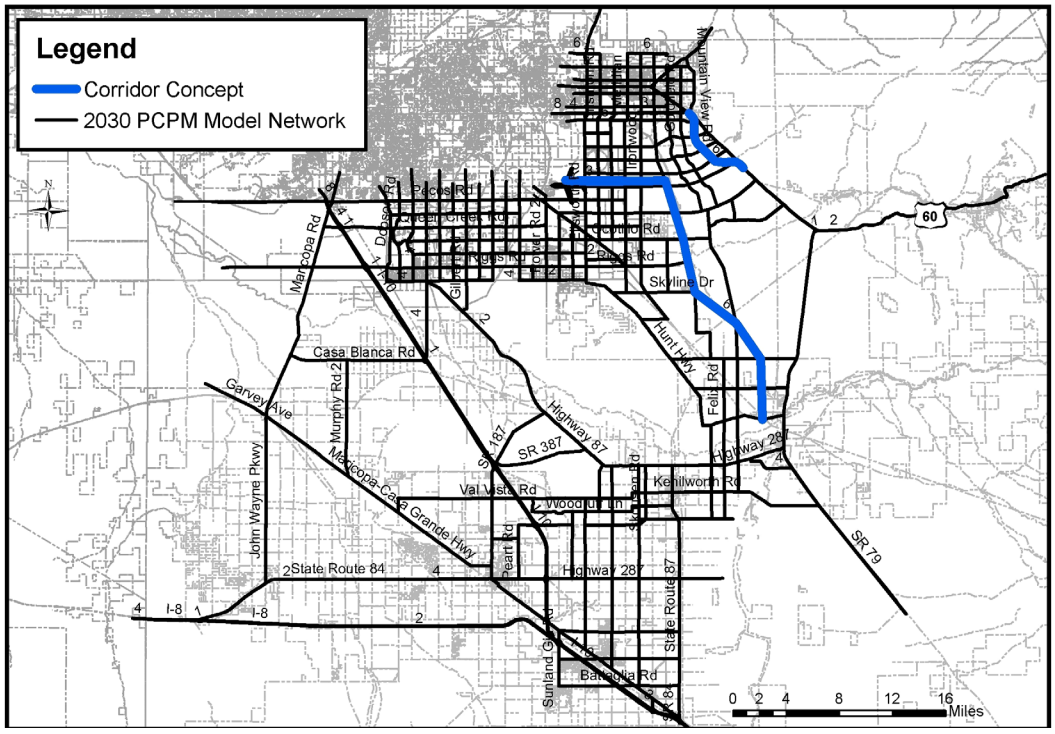
Needs Analysis

The needs analysis determined the demand for the proposed facility and the impact that this facility would have on the surrounding transportation network. Demand for individual corridors was determined by examining the expected use of the facility in 2030. Demand thresholds were identified for both the maximum capacity a particular road can handle (i.e., level of service), and the minimum capacity below which a facility with a lower functional class or fewer lanes would suffice (e.g., the minimum capacity of a six-lane arterial would indicate when a four-lane arterial would suffice to handle the capacity).

An iterative process was used to identify alternatives and evaluate them as part of the needs analysis. The first alternatives evaluated included the base future (Figure ES.3) and the corridors identified by the Southeast Maricopa/Northern Pinal County Transportation Study (SEMNPTS). Further concepts were identified based on the results of these analyses.

Through this iterative process, a set of corridors was identified as needed by 2030. Referred to as the "corridor concept," these needed corridors are shown in Figure ES.4. Numerous additional corridor alternatives were identified and evaluated in this process. These alternatives included additional investment in local arterials and various combinations of additional highways.

Figure ES.4 Corridor Concept

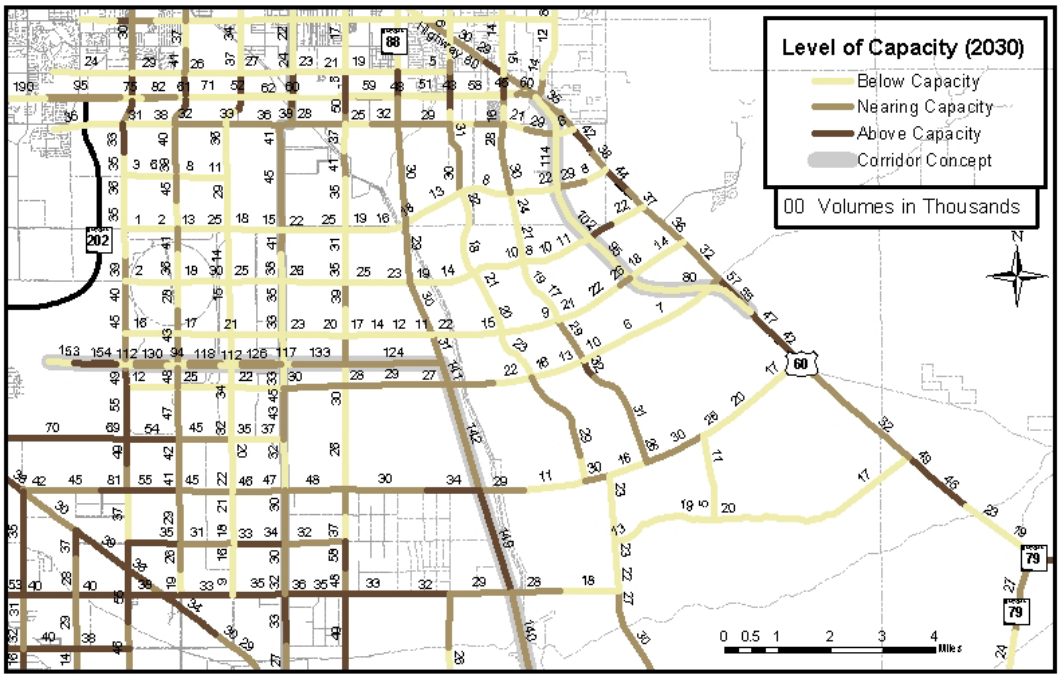


The evaluations were conducted by roadway segments. Each of the corridors was broken into logical segments that represent key break-points. For the Williams Gateway study, three segments were evaluated:

1. The segment within Maricopa County (from Loop 202 to the County line). This segment is funded as a part of the MAG Regional Transportation Plan.
2. The segment from the County boundary to the proposed North-South corridor, in the vicinity of the Central Arizona Project canal.
3. The segment from the proposed North-South corridor east to U.S. 60.

Because the segment within Maricopa County is already funded, the focus of the analysis was on the segments in Pinal County. Each of the alternatives was evaluated on three key issues: 1) demand, 2) level of service, and 3) system performance. A summary of the results of the needs analysis for the corridor concept in the Williams Gateway study area is shown in Figure ES.5.

Figure ES.5 Corridor Concept Plus Findings



Demand

The first question addressed was the demand for the proposed facility – how much traffic was expected to use it in 2030? West of the North-South corridor, there is a clear demonstrated need for additional freeway capacity in the Williams Gateway corridor. These segments handle between 88,000 and over 150,000 vehicles per day. In conjunction with the North-South corridor, they show a clear pattern of travel from the southeast to the northwest.

East of the North-South corridor, there is not sufficient demand expected by 2030 to require a new freeway. Elliot, Warner, Ray, and Williams Field Roads all have segments that carry fewer than 10,000 vehicles per day. The additional capacity provided by the Williams Gateway corridor does not appear to be needed.

Level of Service

The level of service was addressed for both the proposed facility and the surrounding arterial system. In the Williams Gateway study area, nearly all congestion on arterials in the base future is alleviated in both east-west and north-south directions. The primary exception to this is for the Town of Queen Creek. However, none of the proposed alternatives were able to provide significant congestion relief to the Town of Queen Creek.

Similar analyses were conducted for each of the other alternatives evaluated.

System Performance

Each of the corridor alternatives was evaluated for their impact on the overall performance of the transportation system, including issues of mobility, safety, accessibility, and environmental justice. This analysis focused on the joint study area for the three corridor definition studies. This analysis showed substantial improvements in system performance with the new proposed corridors.

Feasibility

In addition to the needs analysis, the feasibility of new corridors was evaluated. This analysis identified potential constraints that would impact the development of future corridors in the Williams Gateway study area. The analysis included an evaluation of engineering, environmental, and land use constraints. Implementation issues and potential funding and financing issues were also considered.

Overall, no fatal flaws were identified that would prevent the construction of a new Williams Gateway corridor. Several constraints do exist, but nothing that would make the corridor impossible.

The Central Arizona Project Canal would have to be crossed if the Williams Gateway corridor connected to U.S. 60. It is feasible to cross the canal, but spillways narrow the potential locations where this crossing can be located.

Much of the lands in the study area are held in State trust. By law, ASLD must get the highest value for this land. ASLD has developed a process to dispose of this land that will take place over the next 40 years. Identification of a precise corridor location will have to work within the ASLD land planning process.

The most significant constraint to corridor development is the cost. The Maricopa County portion of the corridor is already funded as part of the recently extended Maricopa County's half-cent transportation sales tax. In Pinal County, the cost to construct a new facility up to the North-South corridor is estimated at nearly $100 million. Crossing the Central Arizona Project (CAP) canal and

connecting with U.S. 60 and the North-South corridor would increase the cost to around $500 million. Most of this additional cost is for the system-to-system interchanges that would be required. Importantly, no funding is available for engineering studies, right of way, or construction of the Pinal County portion of this facility.

New transportation facilities (both state and local) will be needed to accommodate the rapid growth of Pinal County. Potential funding sources for these new facilities include Federal, state, and local sources. Both Federal and state sources (primarily from gas taxes) face inflationary pressures that reduce the real purchasing power of these sources. There are substantial local sources that could be tapped, including extending Pinal County's local transportation sales tax (similar to the one in Maricopa County), levying impact fees on new development, or using tax increment financing. However, the demand for these sources will quickly outstrip their ability to produce revenue. Unlike Maricopa County, which has an established population and economic base, Pinal County will have trouble generating meaningful revenue in the short term. This is especially true for a transportation sales tax. Residents of Pinal County conduct a substantial portion of their shopping in Maricopa County, yielding a net transfer of potential revenue between the two Counties. Over the long term, as Pinal County develops further, these sources may become productive.

Public Involvement

The public involvement effort was designed to maximize the participation of local residents, elected officials, businesses, and agency stakeholders during the process of defining the Williams Gateway corridor. This process began with the technical advisory committee (TAC) formed for the study. Composed of staff representatives of cities, counties, regional agencies, and other state agencies, the TAC reviewed all deliverables produced for the study, provided information to support the analysis, and helped to coordinate with local officials and other stakeholders.

A series of meetings and open houses were held to inform residents in the region about the study, and to solicit their input on a broad range of issues for use in the planning process. A set of stakeholder meetings was held in the initial phases (December 2004 and January 2005) to identify key issues and constraints to be considered in the process. These meetings were conducted in conjunction with the other corridor definition studies and a concurrent study by MAG to examine potential alignments for the Williams Gateway freeway in Maricopa County.

These meetings were followed by a series of public open houses that presented existing and future conditions to the general public and provided an opportunity to understand key issues from this perspective. The first round of open houses was held in March 2005. These were also conducted jointly with concurrent studies.

After the completion of the needs and feasibility analyses, ADOT conducted a second round of open houses. These open houses presented draft recommendations based on the corridor concept. The open houses were conducted jointly for all three corridor definition studies in late August 2005.

Based on the response to these open houses and an initial Arizona Transportation Board Study session, ADOT management elected to conduct additional stakeholder meetings with each of the jurisdictions in the study area. These meetings led to a revision of the final recommendations, which were presented to the public at three open houses in January and February 2006 and adopted by the State Transportation Board in February 2006.

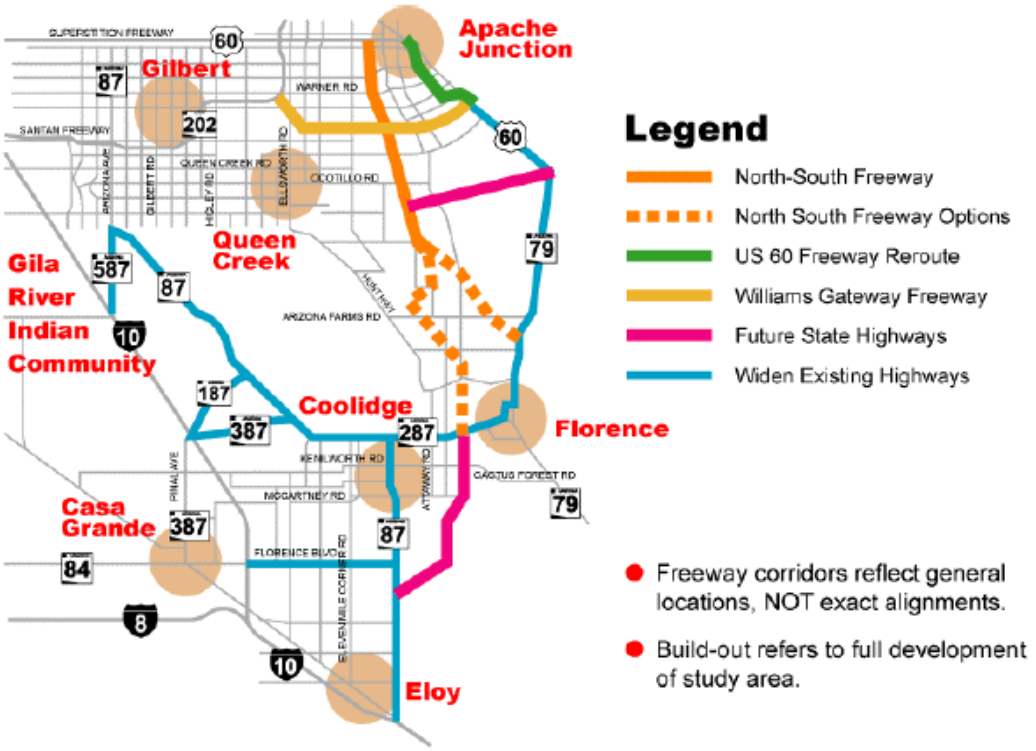
Final Recommendations

The final recommendations for the Williams Gateway study were developed jointly by ADOT senior management for the Williams Gateway, Pinal County Corridors, and U.S. 60 studies. Two primary concerns drove the final set of recommendations. First, stakeholders noted that the future growth of Pinal County, especially of the State Trust Lands, could be greater than was estimated for the corridor definition studies. If this area were to grow faster than expected, additional facilities may be necessary. Second, as a result of the uncertainties, several stakeholders thought that ADOT should consider the ultimate build-out system, instead of a system designed for 2030. Studies currently underway by State Lands would help determine the timing and pace of development, which would drive the timing of the Williams Gateway corridor.

The final recommendations were presented to the State Transportation Board on February 17, 2006 in Casa Grande. Figure ES.6 presents a graphic representation of the following final recommendations:

1. A new Williams Gateway Freeway connecting SR 202 (Santan Freeway) in Maricopa to U.S. 60 in Pinal County;
2. A new North-South Freeway connecting from U.S. 60 near Apache Junction to Florence (SR 79) or Coolidge (SR 287);
3. A reroute of the existing U.S. 60 in the vicinity of Gold Canyon;
4. Potential future state highways linking the North-South Freeway to Florence Junction and extending the North-South Freeway further south towards Eloy and I-10; and
5. Widening and access management for the existing state highway system in Pinal County, where needed and feasible.

Figure ES.6 Definition Study Final Recommendations



1.0 Introduction

The Williams Gateway Corridor Definition Study is one of three studies conducted by ADOT to address the need for new transportation facilities in southeastern Maricopa County and Northern Pinal County. The Williams Gateway study focused on the need for and feasibility of a potential corridor connecting Loop 202 (Santan Freeway) in Maricopa County to U.S. 60 in Pinal County.

The other studies addressed a reroute of U.S. 60 in the vicinity of Apache Junction (U.S. 60 Corridor Definition Study) and two new corridors connecting north-south and east-west in Pinal County (the Pinal County Corridors Definition Study). The analysis and study process for the three studies was conducted jointly, but detailed information about these studies can be found in their respective final reports.

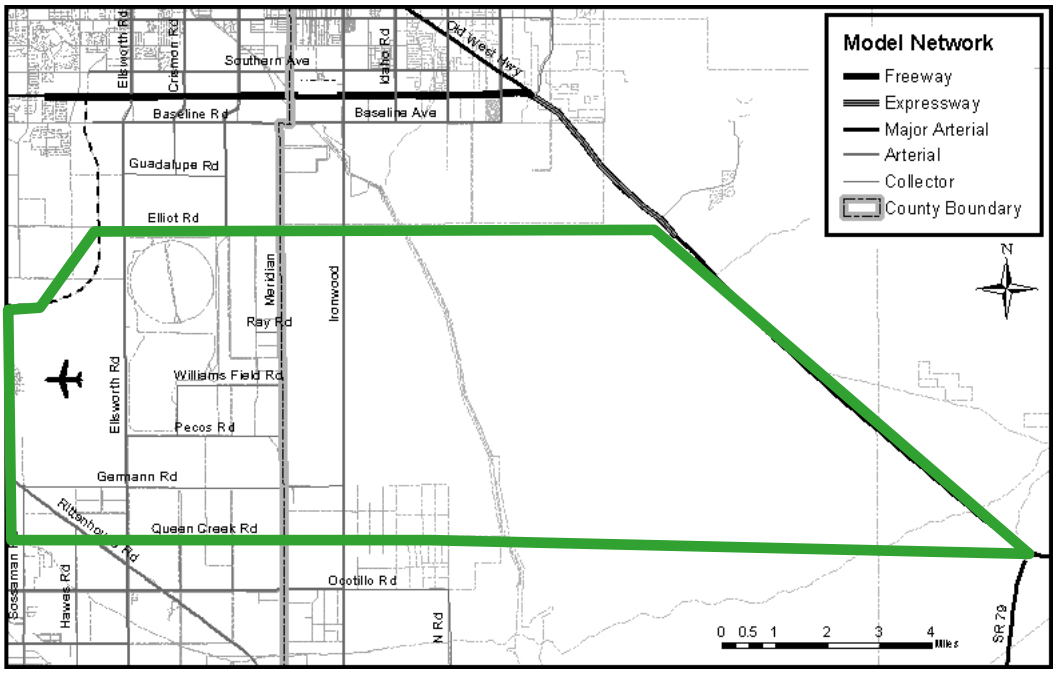
The introduction presents the study area, reviews previous studies that provided the impetus for the corridor definition studies, and presents the overall methodology used to conduct the study. This methodology combined an identification of existing transportation conditions, an analysis of needs, an analysis of feasibility, and public and stakeholder coordination to develop final recommendations for the study area. Each of these key aspects of the study is described in an individual chapter.

1.1 STUDY AREA

The study area covers the southeast corner of Maricopa County and the northwest corner of Pinal County. Figure 1.1 shows the study area, outlined in green. The boundaries of the study area were defined as:

- Western boundary – Hawes Road Interchange, Loop 202;
- Eastern boundary – U.S. 60;
- Northern boundary – Southern extent of current Apache Junction City limits (Elliot Road); and
- Southern Boundary – Queen Creek Road within the Town of Queen Creek, and junction of U.S. 60 and SR 79 in the southeastern corner of the study area.

Figure 1.1 Williams Gateway Study Area



1.2 PREVIOUS STUDIES

Several recently completed studies provided the impetus for the corridor definition studies. The SEMNPTS – a joint effort of the Maricopa Association of Governments (MAG), the Central Arizona Association of Governments (CAAG), and ADOT – originally identified the four new corridors studied as part of this process.

Several other studies provided additional information for use in the analysis, including:

- **Regional plans.** The MAG Regional Transportation Plan (RTP) identifies the expected future transportation system for Maricopa County through 2025.
- **County and local transportation plans.** Transportation plans and small area transportation studies in the region provided information about planned transportation investments and current and future conditions in the study area.
- **County and local general plans.** General plans from Pinal County and the Cities of Apache Junction, Mesa, and Queen Creek helped to identify current and expected future land uses in the study area. They also identified potential policies and major issues for consideration.
- **Socioeconomic studies.** The Central Arizona College Bond Feasibility Study assessed the need for future facilities and program offerings for the Central Arizona College, which has campuses in Pinal County. For each of

16 separate study areas within Pinal County and the southern portion of Maricopa County, the study included a current demographic profile, identified the development inventory, and projected future development and population for five-year periods from 2005 to 2025.

- **Corridor studies.** Transportation and other corridor studies conducted in the area were reviewed for specific information about current and future conditions and planned transportation improvements. For the Williams Gateway study, the Mesa Gateway Parkway Alignment Study assessed the viability of transportation access and parkway alignment alternatives for the Mesa Gateway Development. This was one of the first analyses of a Williams Gateway corridor. The Central Arizona Transmission System Study provided information about a proposed transmission line for the Salt River Project that overlaps the study area along the CAP canal.

In addition to the studies described above, there were several active studies within the study area that address transportation and related issues. These studies were ongoing and include the following:

- **The Superstition Vistas Growth Area Study –** Conducted by the Morrison Institute for Public Policy of Arizona State University, this study is examining the potential disposition of more than 300 square miles of State Trust Lands that are expected to be developed over the next several years. The study will examine potential and appropriate land uses, identify and analyze key factors that affect its growth, and put this growth into a regional context.
- **The MAG Williams Gateway Freeway Alignment and Environmental Overview Study –** Focused on the portion of the Williams Gateway corridor that lies within Maricopa County. The MAG Regional Transportation Plan identified funding for this portion of the Williams Gateway corridor to be built as part of the regional freeway system in Maricopa County. The study will identify MAG's preferred alignment within Maricopa County.
- Several Small Area Transportation Studies (SATS) are ongoing in several parts of Pinal County that overlap with the study area, including for Pinal County and the Town of Queen Creek. Other SATS area also underway or recently completed in the town of Maricopa, Casa Grande, and Florence/ Coolidge.

1.3 ORGANIZATION OF THE REPORT

There were four key components to the analysis conduction for the Williams Gateway study:

1. **Identify existing and future conditions –** The existing conditions were based on ADOT, regional, and city databases that describe the transportation system, population, and related issues in the study area. In addition, a travel

demand model was created to estimate future traffic volumes. Existing and future conditions are addressed in Chapter 2.0.

2. **Analyze the need for a new corridor –** The needs analysis focused in on the demand for a new facility, as well as the impact that a new facility would have on the existing state transportation system and local arterial network. The needs analysis is described in Chapter 3.0.
3. **Analyze the feasibility of a new corridor –** The feasibility analysis identified potential engineering, environmental, land-use, and related constraints for the study area. It also identified costs for new facilities and potential funding sources. The feasibility analysis is described in Chapter 4.0.
4. **Conduct public and stakeholder involvement –** The public and stakeholder involvement process included multiple meetings with individual stakeholder groups (jurisdictions, other state agencies, Indian tribes, and others) and public open houses. The public involvement process and outcomes are presented in Chapter 5.0.

Each of these steps was important to the overall study process. The existing and future conditions analysis provided the technical foundation for the study. The needs and feasibility analyses built on this foundation, identifying whether there would be demand for a facility in the future and if, in fact, it could be built. The public involvement process was woven throughout the technical tasks and provided opportunities to determine the needs of those impacted by the proposed projects. The final recommendations that result from this overall process are presented in Chapter 6.0.

2.0 Existing and Future Conditions

The first step in the Williams Gateway Corridor Definition Study was to identify existing conditions in the study area and forecast future conditions, based on existing plans for the area. This section describes the existing and future transportation network, land uses, and population and employment estimates for the study area. The information developed as part of this step was used to support the analysis of needs and feasibility.

2.1 TRANSPORTATION NETWORK

The existing and future road network descriptions are based on several sources, including the SEMNPTS; the Maricopa Association of Governments (MAG) Regional Transportation Plan (RTP); the Mesa Transportation Plan; and local plans and studies from the Cities of Apache Junction and Mesa, and the Town of Queen Creek. The network includes a combination of freeways, expressways, arterial streets, and local roads. Figure 2.1 presents the facility type of roadways in the study area.

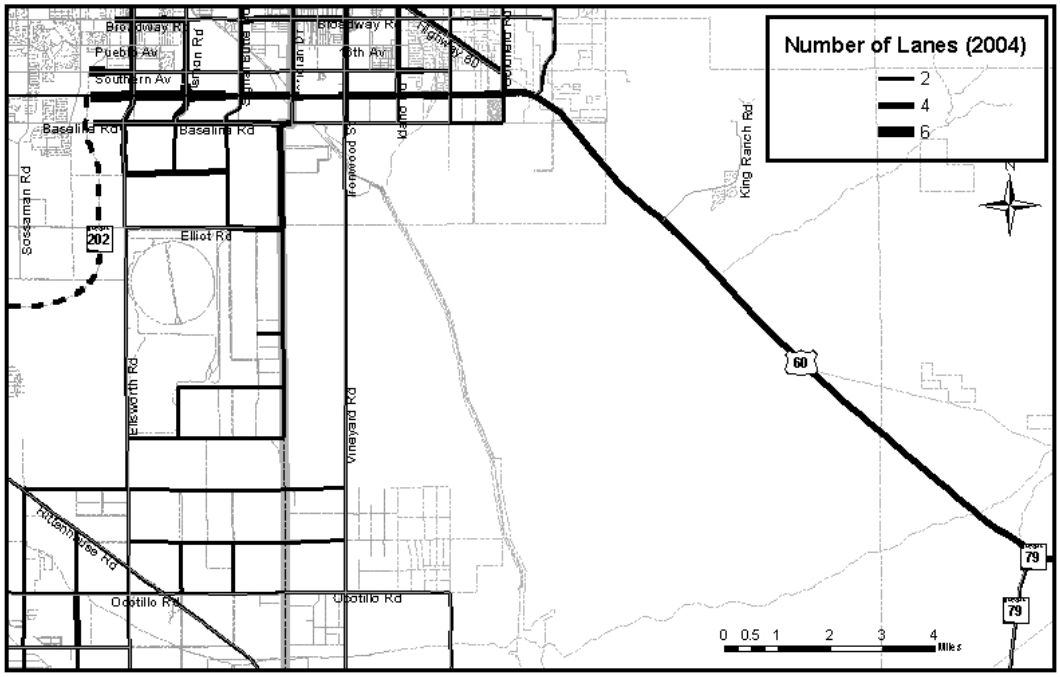
Freeway System

There is currently one major freeway close to the study area, U.S. 60, running east-west to the north of the study area. Interchanges at Ellsworth, Crismon, Signal Butte, Ironwood, and Idaho Roads provide arterial access to the study area. As U.S. 60 turns to the southeast near Gold Canyon, it transitions to an expressway facility with several turn bays, but limited cross traffic. ADOT recently completed a portion of the Santan Freeway (Loop 202) between U.S. 60 and Elliot Road. The remaining sections of the Santan Freeway are expected to be completed in 2007.

Arterial Network

The arterial system in the study area is constituted of a grid system with major east-west and north-south arterials at one-mile intervals. There are numerous breaks in the arterial grid system at this time, and most arterials do not currently cross the large area of State Trust Lands in the eastern portion of the study area. The study area also includes several local roads. Currently, there are east-west arterials at Elliot, Ray, Williams Field, and Pecos Roads. Most of these arterials terminate at or before Meridian Road, except for the southern part of the study area, where the roads connect through to Ironwood Road and beyond. There are currently three key north-south arterials that traverse most or all of the study area: : Ellsworth, Meridian, and Ironwood Roads.

Figure 2.1 Existing Road Network Number of Lanes in Study Area



As part of the development of the Williams Gateway study and two other corridor definition studies conducted by ADOT (U.S. 60 and Pinal County Corridors), a model was developed to estimate future travel demand within the study area. The road network for this model includes all arterials and some collectors, but does not include local roads. Called the Pinal Corridor Planning Model (PCPM), this model covers Southeast Maricopa County and most of Pinal County.

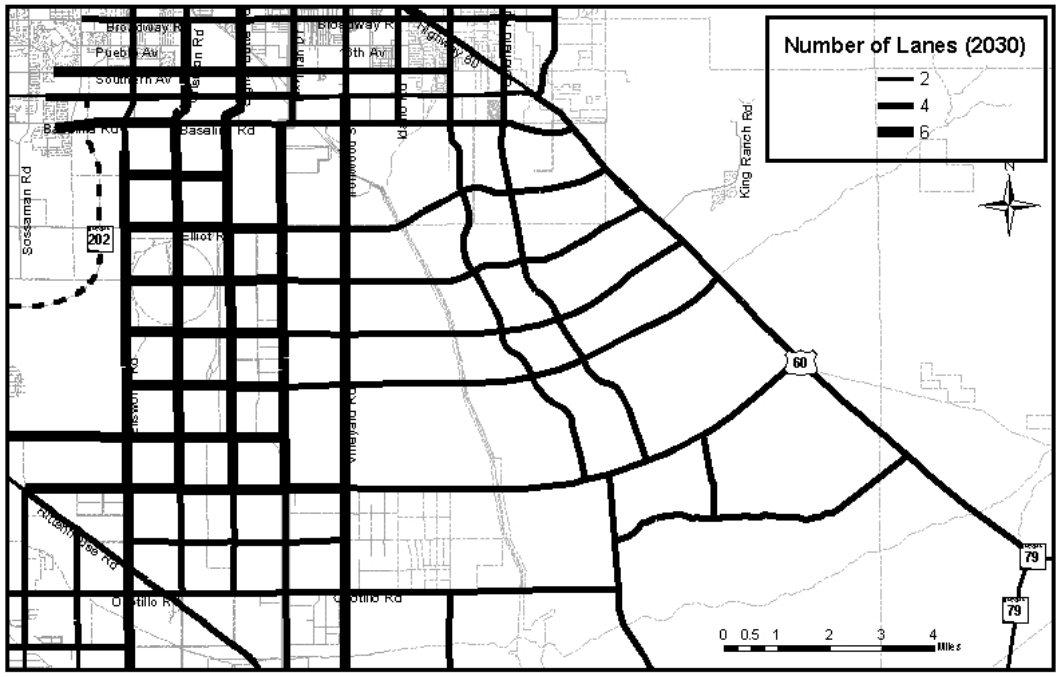
Using recently completed studies within the study area, a likely future (2030) roadway network was identified. The network includes all programmed (funded) projects through 2030 and other likely projects. The latter include widening I-10 to six lanes through Pinal County and the development of the minimal arterial system needed to support the expected development on State Trust Lands. This network was reviewed by technical advisory committees for the three corridor definition studies. Figure 2.2 presents the expected future network for the Williams Gateway study area.

Major arterial improvements expected in the study area include:

- Upgrading nearly all of the two-lane arterials in 2004 to four-lane arterials by 2030;
- Upgrading nearly all the roads in the study area that lie within the Mesa boundaries from two-lane arterials to six-lane arterials by 2025;
- Widening Ironwood Road to six lanes between U.S. 60 and Ocotillo;
- Widening Elliot Road to six lanes from Power Road to Meridian Road;

- Widening Ironwood Road to six lanes between U.S. 60 and Ocotillo;
- Realigning several segments of Rittenhouse Road to improve intersection geometry and separate Rittenhouse Road from the railroad;
- Improving and realigning Ellsworth Road to fix major drainage issues and to avoid the runway protection zone of Williams Gateway Airport; and
- Extending Ray Road around the north end of Williams Gateway Airport.

Figure 2.2 Planned Future Road Network Number of Lanes



Transit Network

The study area currently has limited fixed transit service. Greyhound provides two intercity bus routes with service in or adjacent to the study area. One route provides service along U.S. 60 between Phoenix and Globe, with stops in Apache Junction and Florence Junction. A second route provides service between Phoenix and Tucson, with a stop in Chandler. Taxicab companies are located in Apache Junction and Mesa. An express bus service operates on Power Drive, which is directly adjacent to the western border of the study area from U.S. 60 (Superstition Freeway) north to Mckellips Road.

Several transit investments are expected within or adjacent to the study area by 2030. Within the study area, bus service is expected to reach Meridian Road within the next 15 years, and express bus service is planned along the Santan Freeway (Loop 2020) by 2017. Bus rapid transit service is planned to serve Williams Gateway Airport along Chandler Boulevard in 2007 and along Williams Field Road in 2023. Additional bus service is planned for the airport along

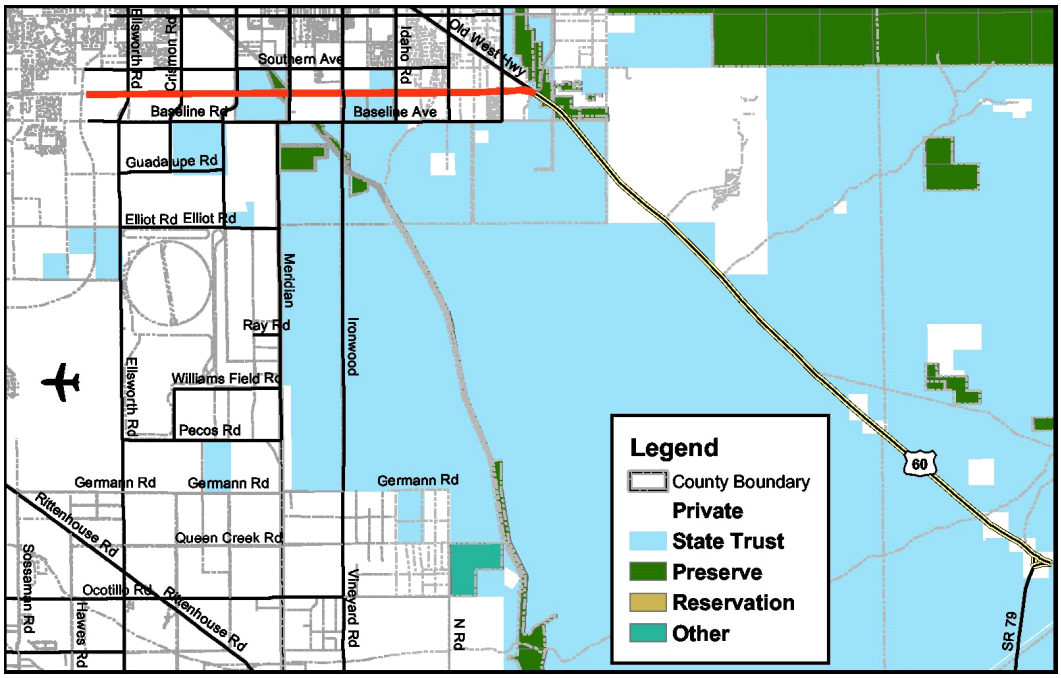
Power Road in 2014. Several other improvements are expected in Mesa adjacent to the study area.

2.2 LAND USE

Today, the land use in the study area is primarily residential or undeveloped with several pockets of commercial activity. The land uses in Apache Junction are primarily residential with employment and retail land uses along U.S. 60 and Old West Highway. The land uses in Queen Creek are primarily residential with employment concentrated in an area bounded by Germann and Queen Creek Roads to the north and south, and Ellsworth and Meridian Roads to the west and east. The primary land uses in Mesa within the study area include the Williams Gateway Airport, GM Proving Ground, adjacent industrial lands, and some residential development. To the east of Meridian Road, the study area is largely undeveloped State Trust Lands. Figure 2.3 presents the ownership of land within and adjacent to the study area.

The primary driver of future growth in the Williams Gateway corridor study area will be the demand for suburban housing in the Phoenix metropolitan region. As the eastern part of the Maricopa County builds out, residential, commercial, and industrial growth are expected to shift east and south into Pinal County.

Figure 2.3 Land Ownership, 2004



State Trust Lands

ASLD controls the majority of land (over 300 square miles) within the study area. With development pressure increasing, the ASLD intends to release a substantial portion of this land, known as Superstition Vistas, for development. These State Trust Lands have never been developed, even for agricultural purposes. The land currently is used as a mixed recreational area, including an off-highway vehicle area. Several ongoing and planned studies will address the disposition of these lands. The Morrison Institute, a policy research organization affiliated with the Arizona State University, is conducting a study to recommend the appropriate development for the State Trust Lands. In addition, ASLD is in the process of developing a master plan for the development of Lost Dutchman Heights, which comprises the portion of Superstition Vistas that are within the Apache Junction city limits.

Other Major Land Owners

The GM Proving Grounds are located immediately to the east of the Williams Gateway Airport. The facility operates on a 5,000-acre proving ground and research facility for vehicles in hot climates. For several years, GM has been planning to relocate the proving grounds to Mexico, and has recently sold the property to a private developer. The 2004 sale included a lease back of the property to GM for five years, followed by a set of renewable one-year lease options. The City of Mesa intends to develop the GM Proving Grounds area as a major commercial area connected to the Williams Gateway Airport.

Another large industrial use within the Williams Gateway Corridor study area is the TRW property, which is used for vehicle safety systems. TRW has planned to consolidate their options on about one-quarter of the current property.

2.3 POPULATION AND EMPLOYMENT

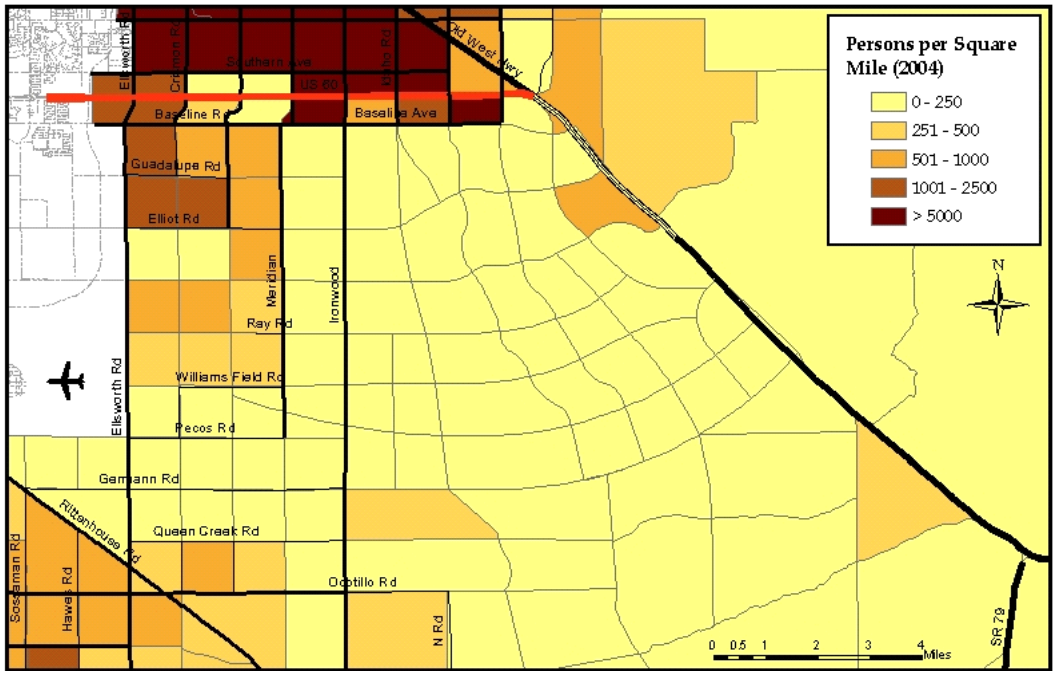
The population and employment estimates and forecasts are based on the Pinal Corridor Planning Model (PCPM). The PCPM socioeconomic data represents a compilation of data from three existing regional modeling systems – MAG, Pinal County, and Apache Junction – and a Bond Feasibility Study (BFS) developed by Applied Economics for the Central Arizona College. In general, the BFS provided overall population projections at a subregional (municipality) level. These projections were used as control totals, and the regional models were utilized to reflect a local understanding of population and employment distributions to specific zones used to estimate trips.

The *Pinal County Planning Model Socioeconomic Forecasts* technical report describes the process used to generate these forecasts. The *Pinal County Population Forecasts* technical report provides comparisons of the PCPM forecasts to other forecasts in the area and provides additional information about the potential development of state lands. The estimates presented in this report are based on the PCPM.

Population

In 2004, just under 67,000 people lived in 29,000 dwelling units within the Williams Gateway study area, with most of these people concentrated within the Cities of Mesa and Apache Junction. Over 200,000 people lived in Pinal County as a whole. Figure 2.4 presents the 2004 population density within the study area.

Figure 2.4 Population Density, 2004

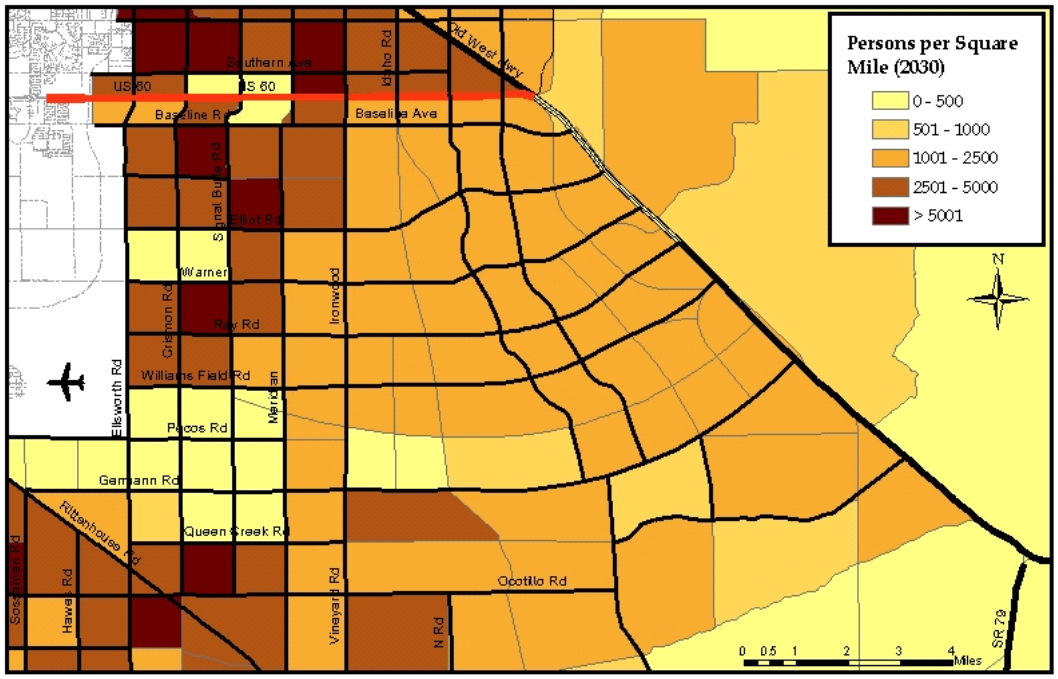


The population of both Pinal and Maricopa Counties is expected to grow rapidly over the next 25 years. Using data generated for the PCPM, the population of Pinal County is expected to grow to over 1 million people by 2030. The Williams Gateway study area is expected to grow to over 295,000 people by 2030, over four times more people than lived in the study area in 2004. This growth reflects the continued development of the existing Cities of Apache Junction, Mesa, and Queen Creek, as well as major new development within the existing State Trust Lands that is expected to begin within the next 10 years.

In 2030, the highest population densities within the Williams Gateway study area are expected to be found in the western part of the study area, though the eastern portion of the study area has grown significantly (Figure 2.5).

Population forecasts for State Trust Lands vary widely, ranging from 300,000 to 900,000 by build out. These differences between forecasts are addressed in the *Pinal County Population Forecasts* technical report.

Figure 2.5 Population Density, 2030



Employment

In 2004, the employment within the Williams Gateway study area was estimated at just over 14,000 jobs. The majority of these jobs are located within the City of Mesa, with some employment in Queen Creek and Apache Junction.

Employment in the City of Mesa and the Town of Queen Creek is growing at a fast pace, though slower than population growth. Employment in the City of Mesa is expected to more than double by 2030. This high growth in employment will have a significant impact on the existing transportation system. Total employment within the study area for 2030 is estimated at over 140,000 jobs, an addition of over 125,000 jobs. The majority of these jobs is located in the City of Mesa, with the largest concentration adjacent to the Williams Gateway Airport property.

Mesa has identified the Williams Gateway activity center as one of eight major employment centers. This activity center includes the Williams Gateway Airport, the college campuses directly west of Williams Gateway, and the GM Proving Grounds. In addition, the Town of Queen Creek has established a growth area approach that emphasizes the concentration of employment in the northern part of Queen Creek, closest to the Williams Gateway Airport. The airport and supporting businesses currently employ more than 800 people, and have an economic impact of $115 million each year. The three campuses (ASU East, Chandler-Gilbert Community College, and Mesa Community College) expect major enrollment growth over the next several years. By 2020, up to 20,000 students are expected to be enrolled at these schools.

On the eastside of the study area, the Arizona Renaissance Festival is an annual event held on a 30-acre parcel located on U.S. 60, approximately six miles southeast of the Mountainview Road intersection. Festival events are held every weekend for about two months out of the year. The festival attracted approximately 250,000 visitors in 2004.

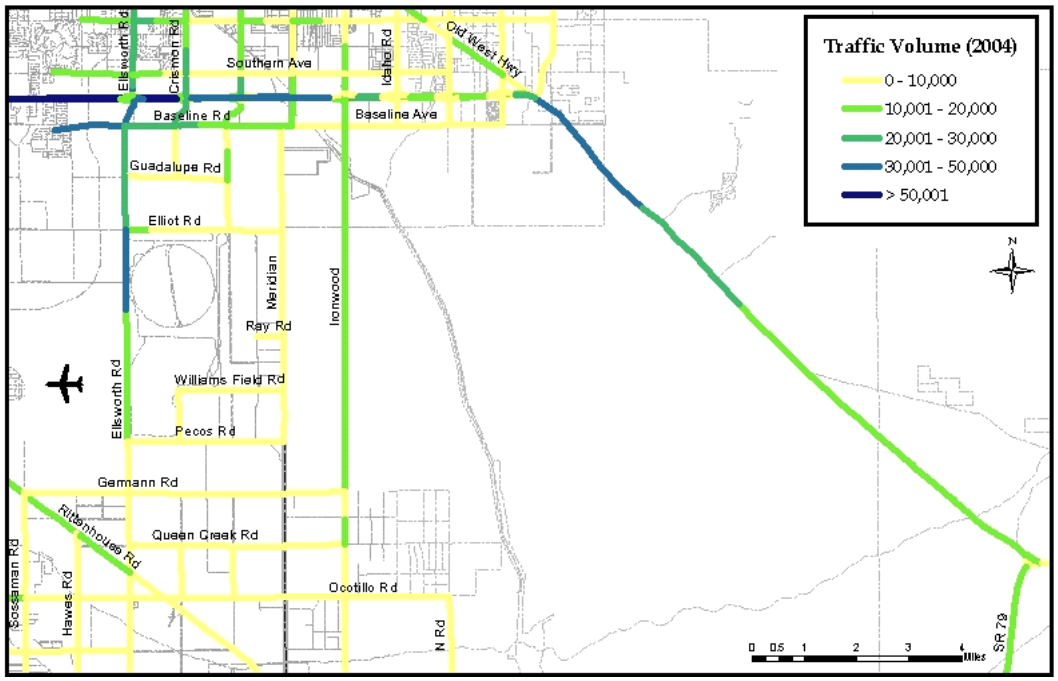
2.4 TRAFFIC VOLUMES AND CAPACITY

Existing and future traffic volumes and capacity levels for roadways in the study area were used to drive the needs analysis process, described in Chapter 3.0. This section presents traffic volumes on existing and expected future roadways. It also describes the LOS expected on the roadways in the future.

Traffic Volumes

The estimated 2004 average daily traffic volumes for the roadway network in the study area are presented in Figure 2.6. The highest freeway volumes in the study area are on the western end of U.S. 60. The highest arterial traffic volumes were in the northwestern part of the study area on portions of Ellsworth, Crismon, and Baseline Roads. Average daily traffic volumes on arterials in the southern part of the study area were generally lower than the traffic volumes in the northern part of the study area.

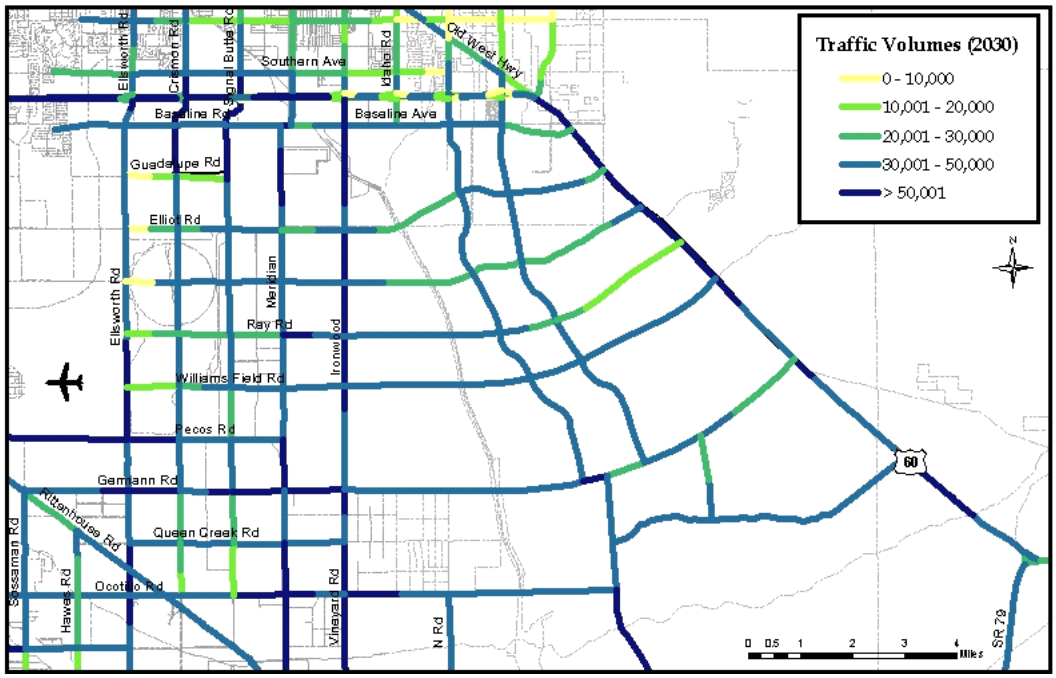
Figure 2.6 Average Daily Traffic Volumes, 2004



Traffic volumes on the arterial network and the freeway and expressway system are expected to grow substantially between 2004 and 2030. With the develop-

ment of State Lands and the continued growth of existing communities within the study area, the total volume of traffic will grow by more than five times. The heaviest volumes can be found on the freeway portion of U.S. 60. Several arterials are also expected to experience high traffic volumes, including over 50,000 vehicles per day on segments of Ironwood, Ellsworth, Pecos, and Germann Roads. Figure 2.7 presents expected traffic volumes in 2030 for roads in the study area.

Figure 2.7 Average Daily Traffic Volumes, 2030



Level of Service

The LOS concept describes the degree of congestion on the roadway, and is a key indicator of the roadway performance. Roadways receive a LOS grade from A to F, with A representing free-flow conditions and F representing complete gridlock. The letter grades are based on a ratio of the number of vehicles using the road to the capacity of the road (the volume-to-capacity (V/C) ratio). In general, ADOT considers LOS D (V/C ratio no more than 0.8) to be acceptable conditions in urban areas and LOS C to be acceptable in rural areas. Numeric and descriptive definitions of the LOS grades are provided in Table 2.1. These grades are consistent with the LOS criteria used by ADOT.

In 2004, nearly all of the roadway network had sufficient capacity to meet travel demand. Only a few arterial segments operate below LOS D within the study area. The freeway portion of U.S. 60 is operating at near free-flow conditions, and the expressway portion (southeast of Mountainview Road) has only several short segments that are approaching capacity.

The growth of the study area over the next 25 years, however, significantly impacts the transportation system. Figure 2.8 presents the LOS grades for roadway segments within the study area for 2030. The LOS ratings are grouped into three categories: 1) below capacity (LOS A to C), 2) nearing capacity (LOS D and E), and 3) above capacity (LOS F).

Table 2.1 Roadway Segment LOS for the State of Arizona

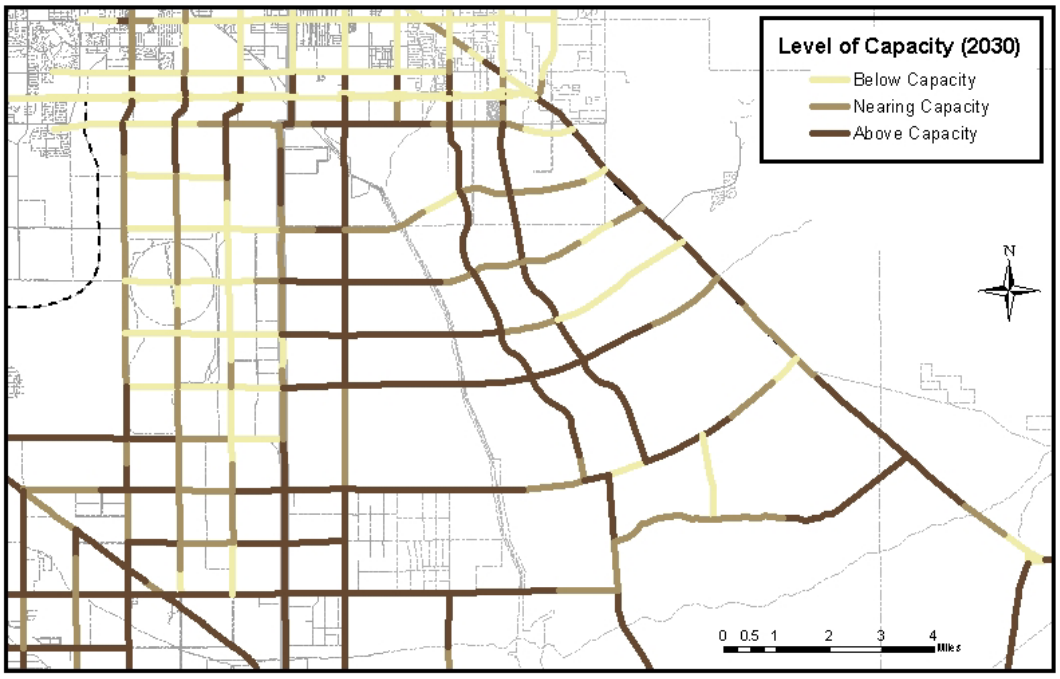
Capacity	LOS	Description	Range of V/C Ratio
Below	A	Free flow	0.0 to 0.60
	B	Stable flow, but noticeable presence of other users in the traffic stream	0.61 to 0.70
	C	Near stable flow, but individual user operations are significantly affected by others	0.71 to 0.80
	D	High-density stable flow with speed and freedom to maneuver are severely restricted to a low, but relatively uniform value	0.81 to 0.90
Nearing	E	Operating conditions at or near capacity level with speeds reduced to a low, but relatively uniform value	0.91 to 1.00
Above	F	Forced or breakdown (unstable) flow with traffic exceeding capacity	Greater than 1.00

Rapid population and economic growth in the study area will produce significant congestion on both freeways and arterials by 2030. Segments of the freeway portion of U.S. 60 are expected to be approaching their capacity limits for 2030. The expressway portion of U.S. 60 (between Mountainview Road and SR 79) will exceed available capacity.

Most of the east-west arterials in the study area will approach or exceed capacity in their future configuration. Several of the north-south arterials, such as Ironwood, will also be operating near or above capacity. For the purposes of modeling, most of these arterials are expected to be four lanes, though Ironwood is six. As the area grows, however, many of these arterials will likely be widened to six lanes to accommodate expected traffic growth.

In the western part of the study area, many of the arterials have capacity available. This partly reflects an expected future investment in a Williams Gateway freeway within Maricopa County (funded as part of the MAG RTP).

Figure 2.8 Level of Capacity, 2030



2.5 CRASHES

Traffic safety was addressed using motor vehicle crash statistics from ADOT for the years 2002 to 2004. Table 2.2 presents the crash record for all roads in the study area for these three years. Crashes have been increasing steadily in number in the study area from 643 crashes in 2002 to 814 in 2004, a 27 percent increase. As traffic volumes increase, however, crashes are likely to increase as well.

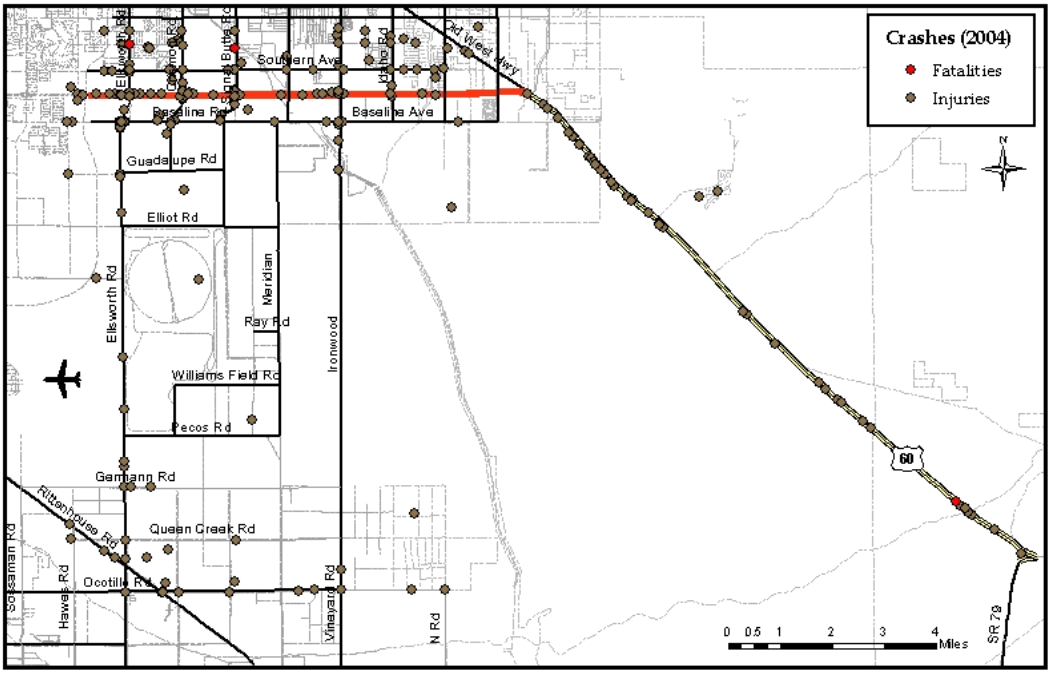
Table 2.2 Crash Record for the Roadway System, 2002-2004

Year	Fatality	Injury	Property Damage	Total
2002	12	213	423	**643**
2003	9	222	421	**649**
2004	3	277	536	**814**

Because much of the study area is currently undeveloped, there are relatively fewer crashes in the study area than in the rest of Arizona. In 2004, there were over 745,000 vehicle miles traveled (VMT) in the study area. The overall fatality rate (fatalities per 100 million VMT) was 1.09. For the State as a whole, the fatality rate has been slightly over 2.0 for the last several years. This rate is notably higher than the U.S. as a whole (close to 1.5 per 100 million VMT). Figure 2.9

indicates the locations of crashes that resulted in injuries and fatalities for the year 2004.

Figure 2.9 Fatalities and Injury Crash Locations, 2004



3.0 Needs Analysis

The needs analysis determined the level of demand for the proposed facility and the impact that this facility would have on the surrounding transportation network. The two primary concepts used to make these determinations were the predicted 2030 traffic volumes and the level of service introduced in Chapter 2.0. This chapter describes the methodology applied, the concepts that were evaluated, and the evaluation results for several key concepts. A complete examination of the needs analysis can be found in *Working Paper #2: Needs and Feasibility Analyses*.

3.1 NEEDS ANALYSIS METHODOLOGY

A single analysis framework was implemented to maintain technical consistency between the three corridor definition studies. This framework used the jointly developed Pinal County Planning Model (PCPM), described in Chapter 2.0, to estimate future traffic volumes. Individual model runs were evaluated using two key factors: demand and level of service.

Demand

Demand for individual corridors was determined by examining the expected use of the facility in 2030. For each concept evaluated, demand estimates were generated using the PCPM and compared to rough thresholds of minimum demand that the type of facility is expected to carry (Table 3.1). These thresholds are not hard and fast rules, but are guidelines that help to identify roadways that fall below (or above) the demand appropriate for a particular facility. The maximum thresholds are based on the capacity of the roadway, and the minimum on the ability of a roadway of lower functional class or with fewer lanes to handle the expected volume in 2030.

Table 3.1 Demand Thresholds

Roadway Functional Class	Number of Lanes (Both Directions)	Minimum Demand (Vehicles Per Day)	Maximum Demand (Vehicles Per Day)
Collector	2	n/a	16,000
Arterial	4	12,000	35,200
	6	25,000	52,800
Expressway	4	25,000	39,600
Freeway	4	50,000	97,200
	6	80,000	145,800

Level of Service

As described above, ADOT uses the LOS concept to measure the extent to which a roadway has sufficient capacity to carry the projected volumes. Roadways receive a LOS grade from A to F, with A representing free-flow conditions and F representing complete gridlock. The analysis assumes that if the volume on the roadway is greater than 80 percent of the capacity, there may be future capacity problems to be addressed (nearing capacity). If the volume exceeds the capacity, the system will not function appropriately.

The evaluation of capacity and level of service was conducted for both the newly proposed corridors and the arterial system. The intent of identifying new corridors is to develop an overall road network that provides for both local and inter-regional trips. Local trips should be handled by the local arterial network. If a new corridor is helping to solve a local transportation issue, it should not be recommended as a future state highway. However, the new corridors should provide relief to the local arterial system by transferring longer-distance trips that may be using the local system in the absence of sufficient capacity on the state highway system.

Corridor Concepts

An iterative process was used to identify corridor concepts and evaluate them as part of the needs analysis. This process was initiated using three basic concepts:

1. **Base Future –** The Base Future concept serves as the comparison point for all modeling and analysis. This concept identifies the expected transportation investments in the study area by 2030, except for any corridor investment. This concept was described in detail Chapter 2.0.
2. **Enhanced Future –** Based on Base Future, the Enhanced Future considers widening arterials in Pinal County to six lanes and existing state highways to four lanes. This scenario examines the impact of local and state transportation investments in existing facilities with no new facilities beyond the Base Future.
3. **SEMNPTS All Corridors –** The SEMNPTS study identified four four-lane freeways for consideration. These four roadways are the four corridors being studied by the Williams Gateway, U.S. 60, and Pinal County Corridors Definition Studies. This concept was used, in comparison with the Base Future, to drive the analysis of individual corridors.

The corridors were broken into individual segments, and each segment was identified with a facility type (access controlled, access limited, uncontrolled arterial) and a number of lanes (ranging from two to six). The facility types and number of lanes were chosen to maximize the function of the facility based on the previous set of results. Additional model runs were conducted and a new set of results evaluated.

Additional concepts were identified throughout the process that included individual corridor segments from the four corridors. These are described in the analysis of results below and in more detail in Working Paper #2.

3.2 NEEDS ANALYSIS FINDINGS

The needs analysis started with the analysis of the Base Future (described in Chapter 2.0), the Enhanced Future, and the SEMNPTS All Corridors concepts. These concepts helped to identify areas that had severe congestion and segments that were operating above or below capacity.

Neither the Enhanced Future nor the SEMNPTS concepts relieved the congestion problems identified in the Base Future. The expanded arterial system identified in the Enhanced Future concept improved local travel, but did not provide for intercity mobility. The four-lane freeways identified by SEMNPTS provided some congestion relief, but provided excess capacity in some areas and not enough in others.

After reviewing these initial results, a Refined All Corridors concept was generated (Figure 3.1). The Williams Gateway corridor is included as follows:

- A six-lane access controlled facility from Loop 202 to the county border;
- A four-lane access controlled facility from the county border to the North-South; and
- A two-lane expressway from the North-South to U.S. 60.

Figure 3.2 presents the traffic volume estimates and level of service findings for the Refined All Corridors concept. Much of the traffic along north-south arterials from the Base Future is diverted to either the proposed U.S. 60 corridor or the proposed North-South corridor. Similarly, much of the east-west arterial traffic shifts to the proposed Williams Gateway corridor. The Williams Gateway/ North-South corridor carries substantial volumes of traffic, upwards of 100,000 vehicles per day on some segments.

In the Williams Gateway corridor area, nearly all congestion on arterials in the base future is alleviated in both east-west and north-south directions. Most of the arterials in the Williams Gateway study area are below capacity, and the remaining are nearing capacity. None are over capacity.

Even as an access limited facility, the Williams Gateway corridor creates excess capacity in the eastern portion of the study area. Elliot, Warner, Ray, and Williams Field Roads all have segments with fewer than 10,000 vehicles per day east of the North-South corridor. The additional capacity provided by the Williams Gateway corridor does not appear to be needed by 2030.

Figure 3.1 Refined All Corridors Concept

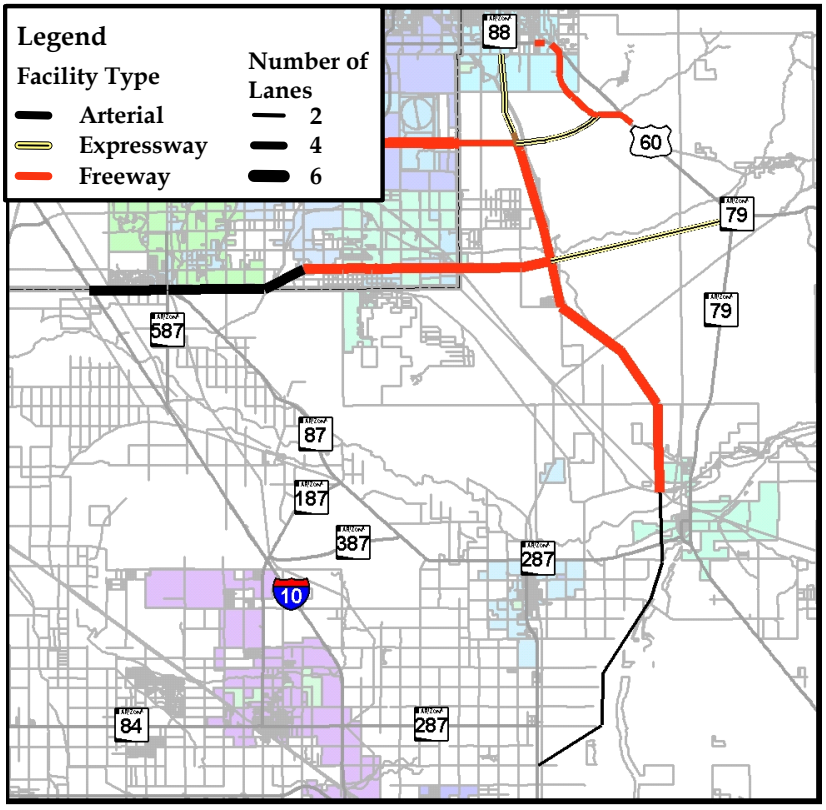
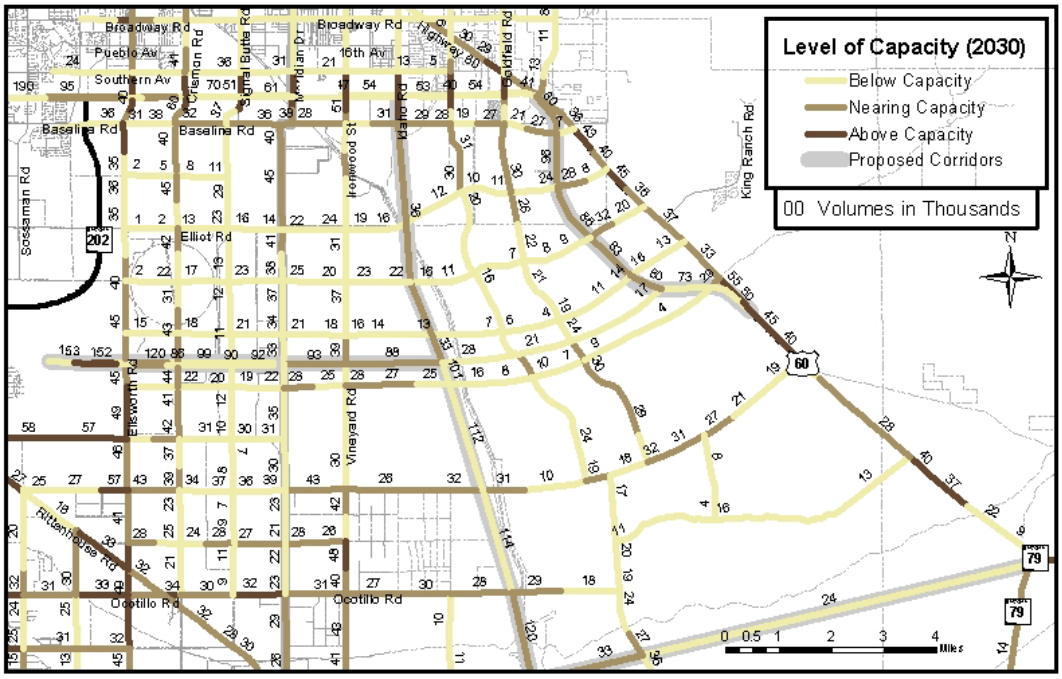


Figure 3.2 Refined All Corridors Findings

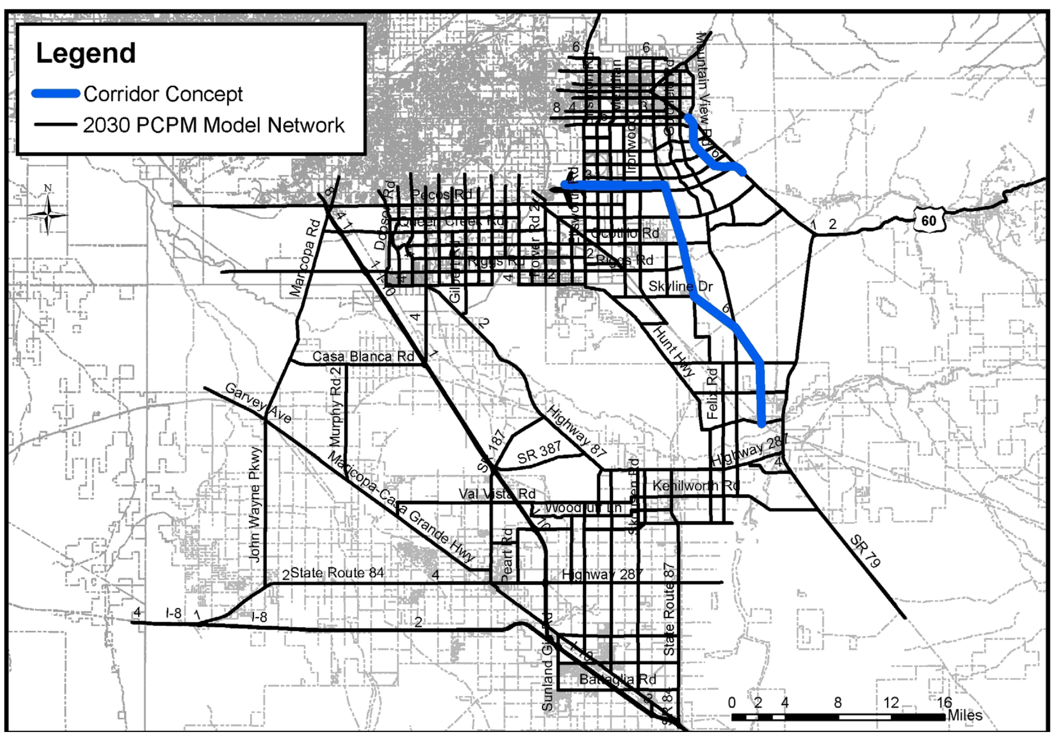


By contrast, west of the North-South corridor, there is a clear demonstrated need for additional freeway capacity in the Williams Gateway corridor. These segments handle between 88,000 and over 150,000 vehicles per day. In conjunction with the North-South corridor, they show a clear pattern of travel from the southeast to the northwest.

Corridor Concept

Based on the analysis of the above described scenarios and others, a "corridor concept" was generated for the three studies. This concept attempted to maximize the demand for the new corridors and the functioning of the arterial system, and represents the corridors that are expected to be needed by 2030. Presented in Figure 3.3, the corridor concept includes a combined Williams Gateway to North-South corridor and a reroute of U.S. 60 in the vicinity of Gold Canyon.

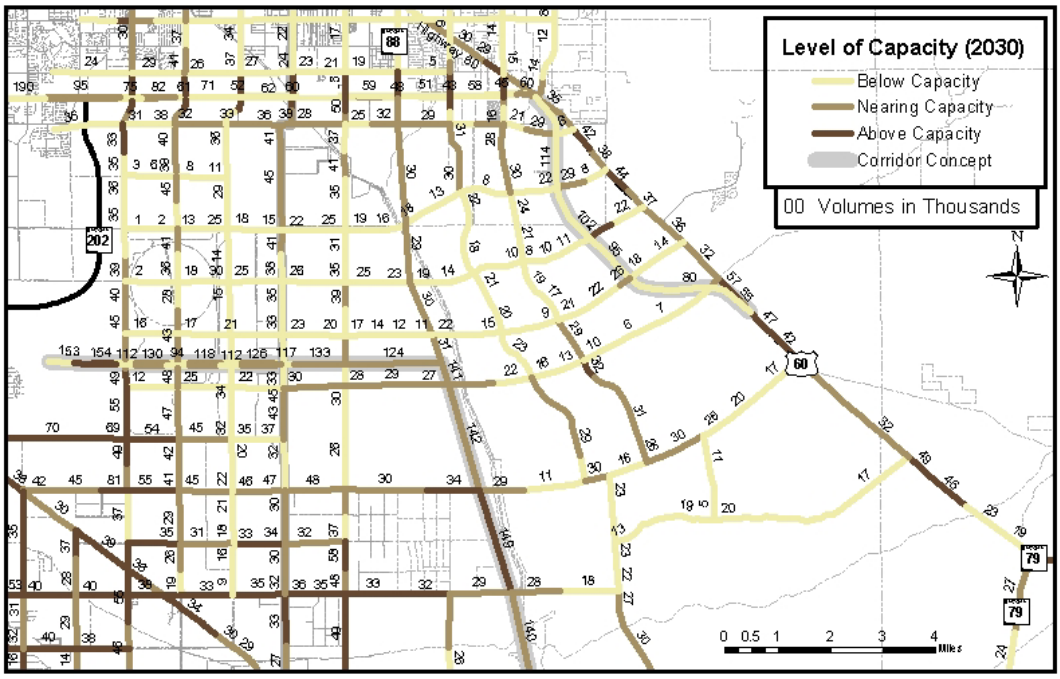
Figure 3.3 Corridor Concept



In addition to Corridor Concept evaluation, a Corridor Concept Plus was evaluated that also included widening the state highways in Pinal County to four lanes, when and where needed. In the Williams Gateway study area, all of the existing state highways are already four lanes. However, improvements elsewhere in Pinal County may have an impact on the study area. For example, widening of SR 87 through the Gila River Indian Community or SR 79 up to Florence Junction may impact the routes used to commute from Florence and Coolidge into the Phoenix metro area.

In the Williams Gateway study area, the findings for the Corridor Concept and Corridor Concept Plus were nearly identical. The findings for the Corridor Concept Plus are presented in Figure 3.4. The two proposed corridors carry volumes similar to the Refined All Corridors concept, but include fewer total segments. The two corridors provide mobility for the most common travel patterns in the study area from the southeast to the northwest. In addition, the arterials in the western portion of the study area function effectively without a Williams Gateway connection to U.S. 60. All of the arterials in this portion of the study area are well below capacity, and new residents in this area would still be within a few miles of an access controlled corridor (either U.S. 60 or the Williams Gateway/North-South Corridor).

Figure 3.4 Corridor Concept Plus Findings



3.3 SYSTEM PERFORMANCE ANALYSIS

In addition to the analysis of demand and capacity of individual corridors and arterials, the needs analysis includes an assessment of the system performance of each of the key concepts evaluated. This analysis was conducted jointly for the three corridor definition studies. A complete analysis of system performance can be found in the *Corridor Definition Study Performance Analysis* technical report. This section summarizes the performance analysis and provides some detailed information on the Williams Gateway study area. The results discussed in this section were one of several factors used to identify the need for new transportation corridors in the study area. The performance measures here must be understood in the context of all other results. In some cases, performance measures

will show small benefits from corridor scenarios that may not be needed and that add substantially to the cost. A small percentage point increase in a performance measure for a corridor segment that significantly increases the cost of new facilities is not typically be considered "good" performance.

The concepts were evaluated using a common set of performance measures that are linked to key planning factors established by ADOT as part of the State Long-Range Transportation Plan (MoveAZ). The five factors evaluated and the performance measures used as part of this process are presented in Table 3.3.

Table 3.2 System Performance Factors and Measures

MoveAZ Planning Factor	Performance Measures
Mobility	Vehicle miles of travel (VMT)
	Vehicle hours of travel (VHT)
	Percent of network that is congested
Safety	Crash rate (fatality, injury, property damage only)
Accessibility	Access to existing employment centers
Resource conservation	Fuel consumption
	Emissions (CO_2, NO_x, and HC)
Resource conservation/ accessibility	Environmental justice

The performance analyses were conducted at several levels. The primary level was for the overall transportation system. This system-level analysis included the joint study area for the three corridor definition studies. In addition, the performance evaluation was calculated for each of five separate subareas that represent key divisions in the overall study area. The Williams Gateway corridor is included in the Apache Junction/Mesa subarea, and the evaluations discussed here focus on this subarea.

Mobility

Three measures were used to estimate mobility:

1. **Vehicle miles of travel (VMT)** provides a system-level estimate of total travel on the system.
2. **Vehicle hours of travel (VHT)** provides a system-level estimate of the total time spent traveling on the roadway network.
3. **Percent of miles in congested condition** provides an assessment of the level of congestion experienced on the roadway network. This measure is captured at two levels. The first level is the percent of highway miles that has a volume-to-capacity ratio of more than 1 (indicating that the number of vehicles attempting to use the road exceeds the capacity). The second level is

the percent of highway miles that has a volume-to-capacity ratio of more than 1.5. This latter condition can be thought of as roads that are highly congested.

Each of the concepts provides substantial benefits to the Apache Junction/Mesa subarea (Table 3.4). Nearly 30 percent of roadway miles are congested in the Base Future. The three concepts that include new corridors reduce this to between 6 and 9 percent. These corridors also reduce roadways that are very congested (50 percent more traffic than capacity) to well under 1 percent of total roadway miles.

Table 3.3 Mobility Performance Measures by Scenario
Apache Junction/Mesa Subarea

Scenario	Total VMT	Total VHT	Percent Network Congested	Percent Network Very Congested
Base Future	7,896,442	741,843	30.90%	2.80%
Enhanced Future	7,921,698	463,605	18.90%	1.00%
Refined All Corridors	7,761,615	268,888	5.90%	0.10%
Corridor Concept	8,316,768	325,732	9.00%	0.70%
Corridor Concept Plus	8,252,473	308,496	7.40%	0.20%

These benefits can also be seen in the VMT and VHT in the study area. In particular, each of the corridor options reduces total hours of travel in the system in Apache Junction/Mesa subarea by between 55 and 65 percent. Overall, each of the corridor options provides relatively similar mobility benefits, though the Refined All Corridors provides slight improvements over the other two.

Safety

Safety is measured using the crash rate by type of crash (fatality, injury, and property damage). Crash rates are presented per million VMT. Table 3.5 presents the changes in the crash rate for the scenarios compared to the Base Future. Again, each of the corridor options provides substantial safety benefits ranging from just under 10 percent for the Corridor Concept to over 15 percent for the Refined All Corridors concept.

Table 3.4 Safety Performance Measures by Scenario
Apache Junction/Mesa Subarea

Scenario	Total Crashes (Deviation from Base)
Enhanced Future	0.90%
Refined All Corridors	-16.20%
Corridor Concept	-9.70%
Corridor Concept Plus	-10.40%

Accessibility

Accessibility was measured using changes in access to major activity centers throughout the study area. Four major activity centers were identified, including one near the Williams Gateway airport and surrounding commercial area. Table 3.6 presents the cumulative percent of trips within 15-minute bands for each of the scenarios.

Each of the corridor-based scenarios provides substantial improvements in accessibility to the Williams Gateway activity center. These scenarios increase the number of trips that are within 30 and 45 minutes by 20 to 35 percent. The Refined All Corridors concept provides the greatest benefits, especially within the 15-minute band, which increases from 30 to 47 percent of all trips.

Table 3.5 Travel Time Breakdown by Scenario
Williams Gateway Activity Center

	Percent of Trips Within Each Band (Cumulative %)		
Scenario	15 Minutes	30 Minutes	45 Minutes
Base Future	28%	38%	61%
Enhanced Future	29%	53%	66%
Refined All Corridors	47%	73%	87%
Corridor Concept	30%	57%	71%
Corridor Concept Plus	31%	63%	71%

Resource Conservation

Resource conservation was evaluated using measures of fuel consumption and vehicle emissions. These two measures capture two aspects of resource usage that vary with levels of congestion and speed on the roadway network. Table 3.7 presents the resource conservation findings for the Apache Junction/Mesa subarea. All of the concepts provide substantial reductions in both fuel consumption and emissions, as compared to the Base Future.

Table 3.6 Resource Conservation Performance Measures

	Fuel Consumption	Emissions
Enhanced Future	-17.9%	-15.5%
Refined All Corridors	-27.9%	-27.0%
Corridor Concept	-21.9%	-20.5%
Corridor Concept Plus	-22.3%	-21.1%

Environmental Justice

Environmental justice (EJ) reflects a combination of resource conservation and accessibility concerns. For the corridor definition studies, EJ was evaluated using the concentration of three key population groups within the study area: minorities, elderly, and impoverished.

Much of the Williams Gateway study area is covered by undeveloped State Trust Lands. Although these lands are likely to have substantial development by 2030, it is difficult to accurately predict the characteristics of the future population in this area. The Apache Junction/Mesa subarea does include a concentration of elderly residents who may face mobility issues. The Williams Gateway corridor is unlikely to substantially impact these residents or resolve the issues they face. Additional public transit, especially on-demand transit, may be needed in this area to provide fundamental mobility for these residents.

3.4 SUMMARY OF FINDINGS

Overall, the combined needs analysis for the Williams Gateway Corridor identified a corridor concept that provides substantially improved mobility in the study area in 2030. The combined Williams Gateway to North-South corridor captures the predominant travel movement in the study area.

The need for the Williams Gateway corridor in the eastern portion of the study area is less clear. Based on the population and employment projections used for this study, there does not appear to be the type of demand for a new corridor in this area. Most of the arterials in the area are expected to have substantial capacity available in 2030. The eastern portion of the study area is expected to develop substantially over the next few decades. As this development takes place, these issues will need to be revisited.

Finally, though the Refined All Corridors concept provides somewhat improved system performance, relative to the Corridor Concept Plus, the improvements do not appear significant enough given the lack of need identified and higher costs associated with constructing these additional facilities. Cost, financing, and other implementation issues are addressed in more detail in Chapter 4.0.

4.0 Feasibility

The feasibility analysis focused on major environmental, land use, and engineering issues within the study area that would impact the construction of a new transportation corridor. It evaluated the entire study area, not just the portion considered needed. As such, it provides useful information for the consideration of future feasibility of all transportation investments in this study area. This chapter also describes the cost of a new Williams Gateway facility and overviews potential state and local funding sources that could be used to construct the Williams Gateway corridor and other new transportation corridors in Pinal County. A complete examination of the needs analysis can be found in *Working Paper #2: Needs and Feasibility Analyses*.

4.1 ENGINEERING, ENVIRONMENT, AND LAND USE

The intent of the feasibility analysis is to identify major potential obstacles to the development of a new transportation corridor in the study area. This analysis is intended to provide a general assessment of feasibility, and not a specific analysis of potential alternate corridor alignments. The basic topics reviewed in the feasibility analysis include engineering feasibility, environmental feasibility, and land use issues.

Engineering Feasibility

The study area contains many unique features, including the GM Proving Grounds; the Williams Gateway Airport; the Central Arizona Project (CAP) canal; the Powerline, Vineyard, and Rittenhouse Flood Retarding Structures (FRS); the Powerline Floodway; the Rittenhouse Auxiliary Airfield; and existing residential, industrial, and agricultural land uses. Table 4.1 presents the major engineering issues identified as applicable to this study effort.

The most critical issue identified is the interface with the FRSs. Crossing the FRS and CAP canal is feasible, but a new transportation corridor should not be planned immediately upstream of the FRSs within the floodpool, as it is currently designed. Future studies will be needed to determine all of the relevant engineering issues and to determine the location of major system-to-system interchanges.

Table 4.1 Summary of Engineering Feasibility

Area of Concern	Summary of Feasibility Analysis
Flood Retarding Structures	It is feasible for a new roadway to cross the FRS, but not in the area of the spillway. Planned redesign of the FRS to accommodate future development will impact crossing requirements.
Central Arizona Project Canal	A new roadway crossing of the CAP canal is feasible. Any crossing would preferably be perpendicular to the canal, and would avoid the existing overchute pipes of the Powerline spillway.
Potential subsidence areas	Earth fissures have been mapped within the area bounded by Elliot Road, U.S. 60, Meridian Road, and Ironwood Drive. No fissures were noted in the vicinity of a potential new facility. New fissures have typically not been developing because groundwater withdrawals in this general area have slowed due to reduced irrigation. A final assessment of fissures and subsidence will require additional study.
Potential alluvial fan areas	Generally, the main design considerations for transportation facilities that cross alluvial hazard areas are to design for potential horizontal migration of flow, provide for relatively high sediment loading, and accommodate runoff in a fashion that does not cause diversion of flow toward presently designated low or no hazard areas. Some redundancy in drainage crossing facilities may be necessary in order to provide for a potential variability of flow locations.
System-to-system interchanges	Three potential system-to-system interchanges have been identified – with Loop 202 (at Hawes Road), with the North-South corridor and with U.S. 60 – depending on the final route selected. Any system interchanges will add substantial cost to the project.

Environmental Feasibility

Environmental experts, databases, and other sources were consulted to evaluate potential impacts with respect to rare and protected species, cultural resources, hazardous materials, noise sensitivity, and flood zones. Table 4.2 presents a summary of environmental feasibility issues in the Williams Gateway corridor.

According to the Arizona Game and Fish Department (AGFD), this project does not occur in the vicinity of any Proposed or Designated Critical Habitats. Several sites have previously been surveyed for cultural resources, but additional surveys may be required, particularly within the Arizona State Trust Lands. Noise sensitivity analyses may be required if the alignment passes near neighborhoods in the southwest edge of the study area. Several underground storage tanks (USTs) are located in the study area, and further research would be required if the alignment were to approach one of these sites.

Table 4.2 Summary of Environmental Feasibility

Area of Concern	Summary of Feasibility Analysis
Protected habitats	Natural resource zoning is present along the CAP canal. Three species – the Cactus Ferruginous Pygmy Owl, the Lesser Long-Nosed Bat, and the Acuna Cactus – could potentially be present in the study area. The Western Burrowing Owl (an Endangered Species Act Species of Concern and a U.S. Bureau of Land Management (BLM) Sensitive species), and the Pocketed Free-Tailed Bat (a BLM Sensitive species) have been observed within the project vicinity. If a roadway alignment is determined and National Environmental Policy Act (NEPA) documentation started, further coordination with the appropriate resource agencies will be needed.
Cultural (archeological and historical) resources	Archeological and historical surveys have been conducted within the study area, but disclosure of site locations is prohibited by law. Additional work with the State Historic Preservation Office and other agencies will be required as this area develops.
Noise sensitive areas	Several residential developments exist within the study area. If an alignment is considered near to these existing communities, additional noise analyses should be undertaken. Noise contours exist around the Williams Gateway Airport and to the southeast of the airport within the study area. A transportation facility is generally consistent with the noise produced from aircraft operations.
Hazardous materials sites	The former Williams Air Force Base is listed as a Superfund Program Site in the Eastern Phoenix Area (July 2003) by the Arizona Department of Environmental Quality. Six underground storage tanks are located within Florence Junction easements owned by ADOT: one tank in the eastbound easement and five in the westbound easement. These tanks are listed as "temporarily closed." Further research should be undertaken if any alignment approaching these sites is considered.

Land Use Issues

This section addresses land use issues, including existing developments, State Trust Lands, parklands, prime and unique farmlands, and Section 404 issues. Table 4.3 presents a summary of land use issues identified within the study area.

No parklands exist in the study area that would serve as an obstacle to roadway construction. No impacts under the Farmland Protection Policy Act would occur as a result of roadway development. Further research regarding existing Jurisdictional Determinations and 404 permits should be undertaken if and when an alignment is determined.

Table 4.3 Summary of Land Use Issues

Area of Concern	Summary of Feasibility Analysis
Existing Developments	The 5,000-acre GM Proving Grounds to the east of the Williams Gateway Airport may be a constraint. Recently sold to a private developer, GM is leasing the property back for an as-yet-determined period. Other existing developments include the TRW industrial facility, and existing residential neighborhoods located along the southwest edge of the study area. Alternative 7 (along Ryan Road) identified by the MAG Williams Gateway and Environmental Overview study would significantly impact existing development between Germann and Queen Creek Roads east of Ironwood Road.
State Trust Lands	There are over 275 square miles of State Trust Lands within the study area. Future land use planning currently underway by the State Lands Department will impact the location (if any) of future corridors through these lands.
Parklands (Section 4(f))	The Pinal County Trail Plan identifies a 20-foot trail corridor along the CAP canal. The Pinal County Comprehensive Plan also shows the CAP canal as a Natural Resource Area, but no recreational uses have been established to date. Much of the State Trust Land in the study area is part of the Desert Wells Multiuse Area (recreation and off-highway vehicle use).
Prime and unique farmlands	No land within the study area is currently zoned for agricultural use. State Trust Lands in the study have never been developed for agricultural uses.
Section 404 issues	Depending on the alignment selected, up to one 100-year floodplain and one Water of the United States might be impacted. The U.S. Army Corps of Engineers recommends that any development within the study area consider Section 404 requirements and permits. Further research should be undertaken if and when an alignment is selected.

Source: DMJM Harris; and Cambridge Systematics, Inc., 2005.

4.2 IMPLEMENTATION

Implementation of the corridor will require additional studies and funds. This section identifies the cost of a new Williams Gateway corridor, an analysis of the jurisdictional responsibility for this corridor, and an identification of the appropriate next steps required for implementation of the proposed corridor.

Cost

Much of the proposed facility identified by this study would be built through State Trust Lands that have never been developed. As such, there is limited existing information about the specific corridor that can be used to help develop

cost estimates. Drainage studies being conducted by ASLD, as well as any potential future engineering and environmental studies conducted by ADOT, will be needed to finalize costs.

Table 4.4 presents a rough estimate of the cost of a new freeway using information from recently constructed freeways in the Phoenix metro area. Costs are provided by component.

Table 4.4 New Facility Cost by Component

Item	Unit	Cost (2005$)
Roadway (pavement- & roadway-related items)	Lane-mile	$2.5 million
Traffic interchanges @ crossroads	Each	$8 million
System-to-system interchanges	Each	$50 million to $150 million
Structures (over canals, washes, creeks)	Square foot	$80
Right of way	Acre	$80,000 to $240,000
Drainage (on-site roadway drainage system)	Mile	$750,000

Note: Costs are in 2005 dollars. Cost of structure at interchange is included in interchange unit cost. Freeway costs based on recent ADOT experience on Red Mountain and Santan Freeway costs in Mesa.

Right-of-way costs are the most variable component of the overall cost estimates. The cost estimates assume that 350 feet of right of way are required, or a total of 43 acres per mile. Because much of the land is State Trust Lands, ADOT will have to negotiate with ASLD to determine the price for the land. Recent State Trust Land auctions have averaged around $180,000 per acre and as high as $240,000 an acre. ADOT does not participate in the public auction process and has paid about $80,000 an acre for State Trust Land on other recent projects. However, given increase land values, the right of way in this area will likely be towards the upper range.

All told, a new freeway-type facility in the Williams Gateway corridor will cost between $35 million and $45 million per mile. As noted previously, the segment of the Williams Gateway freeway within Maricopa County is funded through a one-half-cent sales tax approved by County voters in 2004. The Pinal County portion, which remains unfunded, is just over two miles of roadway. The total cost for this stretch will be between $75 million and $100 million.

If the Williams Gateway corridor were constructed all the way to U.S. 60, the costs would increase substantially. In addition to the costs for roadway construction and interchanges, there would be additional costs for crossing the CAP

canal and two new system interchanges. Table 4.5 presents these additional costs.

Table 4.5 Additional Costs of a Connection to U.S. 60

Connection	Description	Cost ($ millions)
Canal crossing	• An elevated roadway to pass over the CAP canal and the FRS • A bridge over the CAP canal with associated underpasses for the CAP canal crews • An embankment placed on and near the FRS and within the floodpool • Related excavation within the floodpool to offset the additional material	$10
System interchange with North-South	At a minimum, a half system interchange (two directions only, instead of four) with the North-South corridor in the vicinity of the CAP canal	$100
System interchange with U.S. 60	A half system interchange with U.S. 60	$100

Funding and Finance

Funding and finance issues need to be considered separately for the two counties the roadway crosses. The portion of the Williams Gateway corridor within Maricopa County is funded as part of the MAG Regional Transportation Plan (as authorized by County voters as part of Proposition 400 in the November 2004 election).

For the Pinal County portion of the corridor, funding sources have yet to be identified for new corridors. The *Funding and Finance Technical Memorandum* produced for the three corridor definition studies provides a detailed assessment of potential funding sources in Pinal County. Some of the potential sources identified by the technical memorandum that could fund the Williams Gateway and other new corridors include the following:

- **Federal sources –** Federal funding to highways primarily flows through ADOT. Federal funding to states is based on formula that takes into account population, roadway miles, share of transportation revenue collected, and other factors. ADOT distributes these funds across the state based on regulations within each Federal program. For example, Interstate Maintenance funds are spent on maintaining the interstate system at an acceptable condition.
- **State sources –** The Highway User Revenue Fund (HURF) is the primary state funding for transportation. HURF collections include state gas taxes

and vehicle license fees. In 2004, $20 million of HURF funds went to Pinal County and cities within the County. Pinal County's share of funds is likely to change in the future as the County grows and its transportation needs increase.

- **Local sources –** There are several potential local sources that could be used to fund or finance new transportation corridors in Pinal County, including:
  - **Sales tax –** Pinal County has an existing one-half-cent sales tax dedicated to transportation that was recently extended. This is expected to generate up to $1.2 billion through 2030, given expected growth rates in the County.
  - **Property tax –** Arizona law permits transportation-dedicated property taxes to be used, though these are not currently used in Pinal County. A 0.3 percent assessment of home values is expected to produce close to $500 million total by 2030, if implemented immediately.
  - **Traffic impact fees –** Several jurisdictions within Pinal County have implemented traffic impact fees. These fees help to capture the impacts of new residences, shopping malls, office buildings, and other development. Through 2030, it is estimated that around $600 million could be generated from these fees.
  - **Tolling –** Recent examples of tolling in the U.S. have typically been for existing facilities that are congested now. It is difficult to know how a new toll facility in an area that is almost completely undeveloped will affect driver behavior. By 2030, a toll of $0.20 per mile could generate up to $80 million per year. Additional analysis would be needed to accurately forecast revenues from tolls if they were implemented.

All of the revenue estimates presented above are year-of-expenditure dollars. The actual purchasing power of this revenue in current dollars is likely to be much lower, due to inflation.

Implementation

Within Maricopa County, the next steps for corridor development are already in place. ADOT has in place a procurement process for the Maricopa County regional freeway system. Several consultant firms will be conducting Draft Construction Reports (DCRs) and implementing the freeway system. For the Williams Gateway freeway, some of the initial environmental work has been conducted as part of the MAG Williams Gateway Alignment and Environmental Overview study. This information will be used for a DCR that determines a final alignment and develops phases for construction of the freeway.

Within Pinal County, several additional steps are needed to get to this point, including:

- **State Transportation Board action on the draft corridor concept described in this working paper –** Before additional studies can be conducted to

determine potential alignments, the Arizona State Transportation Board must act on the recommendations of the corridor definition studies, including the Williams Gateway study. After reviewing the findings of these studies, the Board must choose whether or not to adopt the recommended corridors as state routes.

- **Alignment studies for the proposed corridors –** If the Board adopts the recommended corridors as state routes, they will be eligible for further study. These studies would address in detail potential alignments and engineering and environmental issues. This would lead to a DCR that identified a preferred alignment, costs, and phasing of construction.
- **Identification of funding –** Funding remains the most significant challenge to the development of these corridors. ADOT faces numerous needs across the State that include preserving and operating the existing infrastructure, and capital investments to expand the existing system. These capital investments include widening existing highways, new interchanges, and many other types of projects. The new corridors identified in this working paper would consume ADOT's entire budget for capital investments for several years. As a result, local and creative financing will almost undoubtedly be needed for actual implementation of these corridors.

5.0 Public Involvement

The public involvement effort was designed to maximize the participation of local residents, elected officials, businesses, and agency stakeholders during the process of defining the Williams Gateway corridor. A series of meetings and open houses was conducted to inform stakeholders and residents about the study and to solicit their input on a broad range of issues for use in the planning process.

The public involvement plan for the Williams Gateway study was conducted in four stages:

1. **Stakeholder meetings –** The first stage of the public involvement effort was to coordinate with stakeholders in the study area. This included meetings with individual jurisdictions and other agencies, as well as private land owners and business groups. The purpose of these meetings was to understand the issues and opportunities that need to be addressed in this study from the perspectives of these stakeholders.
2. **First round of open houses –** The second stage of the public involvement process took place through two public open houses. These open houses provided a forum to present the issues identified during the stakeholder process; and the transportation, land use, and related conditions of the study area, as identified through technical analysis. These meetings provided an opportunity for the public to present additional issues to be considered. The material from the stakeholder groups and the first round of open houses was used to help shape the evaluation framework for the study. The evaluation of potential alternatives was designed to address the entire range of issues raised by the public and as a result of technical analysis.
3. **Second round of open houses –** The next stage of public involvement took place through four additional open houses. The second round of open houses provided a forum to present potential alternative corridor definitions and their evaluation to the general public and stakeholders.
4. **Management stakeholder meetings –** After the completion of the second round of open houses, ADOT senior management met with stakeholders in the study area for all three corridor definition studies. These meetings included jurisdictions in the area (counties and cities), as well as state lands, and others. These meetings were used to produce a consensus recommendation for presentation to the State Transportation Board.

Additional details on the public involvement sessions can be found in summary reports for each phase of the study.

5.1 STAKEHOLDER MEETINGS

The first stage of the public involvement process involved working with stakeholders in the region to identify key issues for the study to address. This process included meetings with jurisdictions, business groups, ASLD, other major land owners, and other agencies. Held early in the planning process, the stakeholder meetings provided valuable input that helped ensure that the appropriate issues were considered as part of the definition of the Williams Gateway corridor. The stakeholders provided comments that guided planners with respect to economic, land use, and environmental considerations, among others, that affect mobility along this corridor.

Process

Stakeholder interview meetings were held in December 2004 and January 2005 in conjunction with the MAG Williams Gateway Freeway Alignment and Environmental Overview Study and the U.S. 60 Corridor Definition Study. All told, a total of 15 meetings were held with individual cities, counties, and groups throughout the study area, and two focus groups were held with a cross-section of stakeholders from Gold Canyon and Apache Junction.

The meetings provided an opportunity for ADOT and consultant staff to understand the issues, concerns, opportunities, and needs of the various groups with respect to the corridor. The objective for the Williams Gateway study was to solicit input about the larger mobility and planning issues relevant to the corridor.

Summary of Findings

Across the meetings, four issues stood out as consistent themes:

1. **Economic development –** An overriding theme raised in the meetings was the need to develop a commercial and industrial center to provide employment to residents in East Valley towns and new developments in Maricopa and Pinal Counties. Municipalities in the area are looking to the growth of the airport and the new freeway as catalysts for the creation of employment in their jurisdictions. Stakeholders noted that job creation in this area is important to help improve the jobs/housing balance in the study area.
2. **Land use –** Future population increases and land use changes will significantly impact the planning for a new corridor. Though the GM proving grounds is expected to continue operation at least for the next five years, the potential for redevelopment in the future should be considered. Participants also noted that there will be a need for a transition between land uses and suggested that the proposed corridor may be able to serve as the transition between commercial and residential uses. In addition, the development of State Trust Lands will create an even greater need for a new corridor in this area.

3. **Coordination with other transportation elements –** Stakeholders highlighted the need to consider connectivity with the existing freeway and arterial street system in Maricopa and Pinal Counties. Transit was also raised as an issue for the area by some participants, particularly to serve students at ASU and the community college. There is a desire to plan for future public transit, while acknowledging that this has been a challenging issue.
4. **Environment –** Flood control issues are a major consideration for the area, particularly the three flood control structures adjacent to the CAP canal. Stakeholders also identified drainage issues on State Trust Lands as a major consideration that must be taken into account in the definition of the Williams Gateway corridor. Multiple stakeholders suggested that transportation facilities, including both streets and major corridors, should be adjacent to major washes in this area to provide for better management of transportation facilities, recreational trails, drainage, and other environmental issues.

5.2 FIRST ROUND OF OPEN HOUSES

The second stage of the public involvement process involved conducting open houses to present material on the Williams Gateway corridor to the public, and to receive feedback on the issues that should be considered as the project team identifies and evaluates potential corridor concepts.

Process

Two open houses were conducted as part of the second round of public involvement, one in Maricopa and one in Pinal County. The events included a short briefing about the project and an informal setting for the public to review displays and ask questions of staff and consultants.

The open houses were held on March 24, 2005 at the ASU East Campus in Mesa, and on March 30, 2005 at the Peralta Elementary School in Gold Canyon Ranch. The meetings included presentations and display boards that described each of the studies, inventoried existing and future conditions in the study area, presented key issues identified by the consultant team, and relayed study progress to date. In addition, a questionnaire was distributed to all attendees to allow for direct feedback on the issues identified as part of the projects.

The Mesa open house was conducted jointly with the MAG Williams Gateway Alignment and Environmental Overview Study. The Gold Canyon open house was conducted jointly with the ADOT U.S. 60 Corridor Definition Study.

Summary of Open House Input

Though the two open houses were different in substance and format, there were a number of similar concerns expressed about the Williams Gateway corridor. At the Mesa open houses, many comments stated a preference for a particular

alternative for the MAG Williams Gateway Alignment and Environmental Overview Study. Because the purpose of the ADOT Williams Gateway study at this stage was to identify the key issues to help shape the evaluation of corridor concepts, the comments described here are based on the key issues raised by participants. These issues included:

- **Economic development –** A primary issue for participants related to the corridor was economic development. Many participants believed that a new transportation corridor has the potential to bring commercial and industrial development and employment to southeastern Maricopa County. In a related issue, participants noted that corridor development should be consistent with the land use plans of nearby cities, such as Queen Creek and Mesa.
- **Access –** It was noted that the corridor location be chosen to adequately serve the anticipated development of the Williams Gateway Airport. Participants highlighted access issues from the south and west. In addition, participants noted the importance of improving access to other major highway corridors, such as the future Santan Freeway (Loop 202) and U.S. 60.
- **Traffic growth –** Participants expressed concern about growing traffic congestion on arterials in the Cities of Queen Creek and Mesa. Developing communities in northern Pinal County, such as the Johnson Ranch area, currently use arterials in Queen Creek and Mesa for commuting, shopping, and other purposes.
- **Area character –** Preservation of rural character was mentioned by a few participants. Some noted a preference for any potential facility to maintain adequate distance from Queen Creek's residential neighborhoods. A few stated a desire to choosing a corridor most consistent with limiting development in that area.
- **Environmental issues –** Some participants expressed a desire for an alternative that would have the least environmental impact. One noted that a corridor that aligns with the airport noise corridor and confines noise to a specific area would be desirable.
- **Timing/coordination –** A few participants commented on the timing of the project – that they would like to have new transportation such as a freeway built as soon as possible. A few others asked or commented about coordination of the studies with Pinal County, and had the perception that there was a lack of coordination between Maricopa and Pinal Counties.
- **Funding –** This was one of the top concerns for participants at the Gold Canyon open house. Because the MAG RTP included funding for a Williams Gateway Freeway to the County line, this issue was not raised at the Mesa open house.

At the March 30 open house in Gold Canyon, participants also provided comments through a questionnaire that asked them to respond to nine key

challenges. Table 5.1 presents the participants' survey responses. Because this open house was a joint effort for the U.S. 60 and Williams Gateway studies, participants were asked to select the corridor to which their comments pertained.

Table 5.1 Key Challenges Identified by Participants

Challenge	Corridor Identified		
	Williams Gateway	U.S. 60	Both or none
Rapid population growth	2	18	11
Development of state lands	2	7	7
Annexation issues		3	5
Traffic increase		18	14
Safety		18	9
Regional and statewide connectivity	1	6	3
Local access	1	11	8
Environmental sensitivity		5	4
Funding	2	6	3

Note: Respondents were allowed to select more than one challenge.

5.3 SECOND ROUND OF OPEN HOUSES

The third stage of the public involvement process involved conducting joint open houses for the three corridor definition studies to present material on the Williams Gateway: North-South, East-West, and U.S. 60. The overall purpose of these open houses was to present the results of the needs and feasibility analyses, and to receive feedback on potential study recommendations.

Process

Four open houses were conducted as part of the third round of public involvement in the Towns of Apache Junction, Florence, Gilbert, and Queen Creek. The events included a short presentation about the status of the project and the needs and feasibility analyses and an informal setting for the public to review displays and ask questions of staff and consultants.

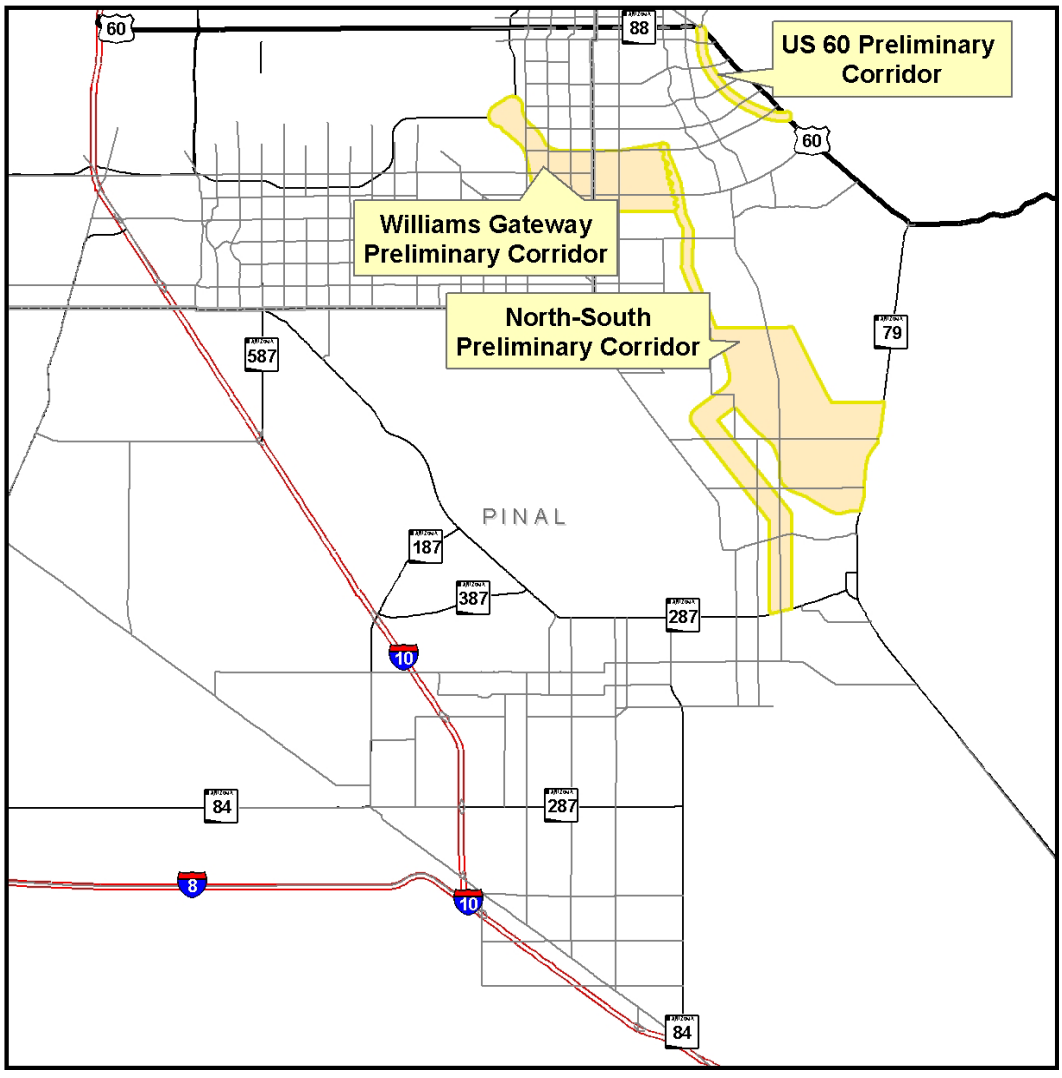
Each of the open houses followed a similar format – a presentation was made by ADOT staff followed by a public question and answer session. ADOT Transportation Planning staff, ADOT Communication and Community Partnerships staff, members of TAC, the consultant teams, and local government officials were present at each open house to answer questions and to interact with the public. Table 5.2 lists the locations and estimated attendance at each of

the open houses. Figure 5.1 presents the corridor recommendations presented at the open houses.

Table 5.2 ADOT Definition Studies Open House Attendance

Open House Location	Date	Number of Attendees
Apache Junction Town Hall	August 22	83
Queen Creek Town Hall	August 23	57
Town of Gilbert Southeast Regional Library	August 29	52
Florence Town Hall	August 30	65

Figure 5.1 Open House Preliminary Recommendations



Summary of Open House Input

Comments at the second round of open houses were received primarily through question and answer sessions following ADOT's presentations of the recommendations. Several key themes emerged from these presentations:

- Participants expressed thanks for the hard work conducted by ADOT staff and the consultant team on the Corridor Definition Studies.
- Concern was expressed at each of the meetings regarding the validity of future population and employment forecasts. Participants suggested that this was a moving target and could be much higher than was expected from the sources used for the study. For example, the area of State Trust Lands between the County border and U.S. 60 has development estimates ranging from 350,000 to 900,000 residents.
- Numerous participants suggested strong support for a more substantial state highway network than the one presented at the open houses. Strongest support was provided to extend the Williams Gateway corridor all the way to U.S. 60, but some participants suggested that all four corridors should be retained for future planning, given the uncertainty of future development. Some participants also suggested that ADOT should look beyond 2030 to 2050 for ultimate build out of the area when developing recommendations for the future transportation system.
- Timing and funding were among the most significant issues raised. Open house attendees were concerned that development taking place now would occur on right of way needed for these new transportation corridors. Purchasing right of way now will help protect these corridors for future development whenever they are needed.
- A number of participants expressed concerns regarding the local arterial system and how it would connect to the proposed corridors.

5.4 FINAL STAKEHOLDER MEETINGS

After the second set of open houses were complete, ADOT management and staff received numerous requests for additional discussion about the recommended corridors presented during the open houses. To respond to some of the concerns raised during the open houses, ADOT management chose to conduct individual meetings with major stakeholders within the study area for the three corridor definition studies to better understand the concerns raised during the second round.

Process

Eleven meetings were conducted between November, 2005 and February, 2006 with major stakeholders impacted by the plan. Meeting participants included:

- City of Chandler;
- Maricopa County Department of Transportation;
- City of Gilbert;
- City of Apache Junction;
- Pinal County;
- Florence;
- City of Coolidge;
- City of Mesa;
- Town of Queen Creek;
- East Valley Partnership; and
- Rose Law Group;

Through these meetings, ADOT management refined the final recommendations to reflect the additional input received from these stakeholders. Many of these stakeholders suggested that a more substantial investment would be needed in the state highway system in Pinal County in the coming years than was envisioned in the draft recommendations. These stakeholders cited uncertainty surrounding the future population estimates and the potential for much greater growth beyond 2030.

After completing these stakeholder meetings, an additional set of open houses was held in three locations (Gilbert, Florence, and Queen Creek) to present the revised recommendations.

6.0 Recommended Corridors

The final recommendations for the Williams Gateway study were developed jointly by ADOT senior management for the Williams Gateway, Pinal County Corridors, and U.S. 60 studies. Two primary concerns drove the final set of recommendations. First, stakeholders noted that the future growth of Pinal County, especially of the State Trust Lands, could be greater than was estimated for the corridor definition studies. If this area were to grow faster than expected, additional facilities may be necessary. Second, as a result of the uncertainties, several stakeholders thought that ADOT should consider the ultimate build-out system, instead of a system designed for 2030. Studies currently underway by State Lands would help determine the timing and pace of development, which would drive the timing of the Williams Gateway corridor.

Based on the analysis completed for these studies and the input received at stakeholder meetings and open houses, ADOT recommended inclusion of the following corridors.

1. A new Williams Gateway Freeway connecting SR 202 (Santan Freeway) in Maricopa to U.S. 60 in Pinal County;
2. A new North-South Freeway connecting from U.S. 60 near Apache Junction to Florence (SR 79) or Coolidge (SR 287);
3. A reroute of the existing U.S. 60 in the vicinity of Gold Canyon;
4. Potential future state highways linking the North-South Freeway to Florence Junction and extending the North-South Freeway further south towards Eloy and I-10; and
5. Widening and access management for the existing state highway system in Pinal County, where needed and feasible.

These recommendations were presented to and approved by the ADOT Transportation Board on February 17, 2006 in Casa Grande. Figure 6.1 presents a graphic representation of the final recommendations.

In addition to the recommended corridors, ADOT is funding Small Area Transportation Studies (SATS) for several communities in the area. SATS have already been completed or are underway for Pinal County and for the Cities of Apache Junction, Maricopa, Queen Creek, Coolidge, Florence, and Casa Grande. These studies help identify the local roadway and transit system improvements needed to support the development of these communities.

Implementation of these recommendations remains a major constraint. Currently, there are no funds available for the development of the proposed corridors, including right-of-way purchase, design, or construction. Future funding will depend on a number of factors, including the pace of development in Pinal

County, the growth or decline of state and Federal funding sources, availability of local funds to support development, and others.

Figure 6.1 Definition Study Final Recommendations